# Level 0.0 - 1.9

**LEVEL:**          0.0 - 1.9

**STANDARD:**       1.0    Demonstrate pre-computational skills

**BENCHMARK:**      01.01  Identify and write number symbols 0-100.

**MATERIALS:**      Trace the Numbers worksheet, Write the Missing Numbers worksheet, Write the Numbers from 0-100 worksheet,  pencils

**PROCEDURE:**      Review number 0-10 by naming each number and demonstrating correct number formation on the board.

The students may use this as a reference when completing the worksheets.

Student: _____     Date: _____

Teacher: _____

# Trace the Numbers

**Directions:** Use a pencil to trace over each number.

| 0 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

Student: _____     Date: _____

Teacher: _____

| 0 |

**Directions:** Write the missing numbers.

| 1 |   | 3 |   |   | 6 |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|
|   | 12 |   |   |   |   | 17 |   | 19 |   |
|   |   |   |   |   |   |   |   |   |   |
|   |   |   | 34 |   |   |   |   |   | 40 |
|   |   |   |   |   | 46 |   |   |   |   |
|   |   |   |   |   |   |   | 58 |   |   |
|   |   |   |   |   | 66 |   |   |   |   |
|   |   | 73 |   |   |   | 77 |   |   |   |
|   |   |   |   | 85 |   |   |   | 89 |   |
|   |   | 93 |   |   |   |   |   |   | 100 |

# ANSWER KEY

| 0 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|

**Directions:** Write the missing numbers.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

Student: _____     Date: _____

Teacher: _____

# Write the Numbers from 0-100

**Directions:** Write the numbers in order from 0-100.

## ANSWER KEY

# Write the Numbers from 0-100

| 0 | **Directions:** Write the numbers in order from zero to one hundred |
|---|---|

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

**LEVEL:**        0.0 - 1.9

**STANDARD:**        1.0    Demonstrate pre-computational skills

**BENCHMARK:**        01.02  Read words for numerals 1-20.

**MATERIALS:**         Number Words Crossword Puzzle, pencils, Number Words Crossword Puzzle Answer Key, transparency, overhead projector

**PROCEDURE:**        1.  Review numbers with the class by calling out different numbers from 1-20 and have volunteers write the numerals on the board.

2.  Put students in small groups of three and pass out a Number Words crossword puzzle to each student.  Have students complete the crossword puzzle using words for numbers.

3.  Go over the worksheet by transposing a completed crossword onto an overhead projector.  Go around the room calling on students to spell the answers aloud.

**VARIATIONS:**        •  Make puzzles with number words for higher numbers.
        •  Make puzzles using addition and subtraction to come up with numbers.
        •  Have students make their own puzzles using a grid.
        •  Use www.puzzlemaker.com for assistance in making puzzles.

Student: _____     Date: _____

Teacher: _____

# Number Words Crossword Puzzle

**Directions:** Complete the crossword puzzle using words for numbers
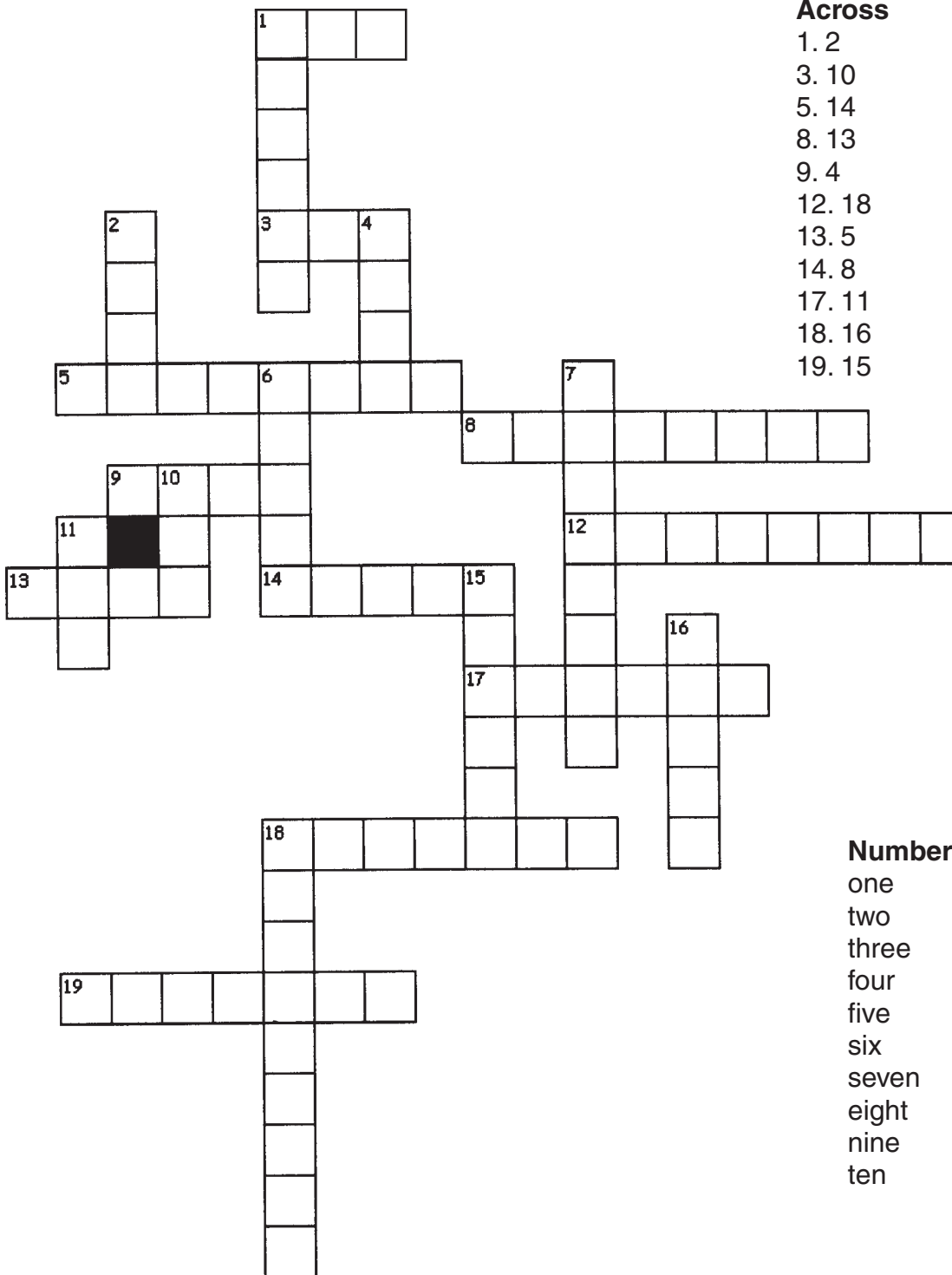
**Across**
1. 2
3. 10
5. 14
8. 13
9. 4
12. 18
13. 5
14. 8
17. 11
18. 16
19. 15

**Down**
1. 20
2. 0
4. 9
6. 3
7. 19
10. 1
11. 6
15. 12
16. 7
18. 17

**Numbers Word Bank**

| | |
|---|---|
| one | eleven |
| two | twelve |
| three | thirteen |
| four | fourteen |
| five | fifteen |
| six | sixteen |
| seven | seventeen |
| eight | eighteen |
| nine | nineteen |
| ten | twenty |

# ANSWER KEY

# Number Words Crossword Puzzle

**Directions:** Complete the crossword puzzle using words for numbers

**Across**
1. 2
3. 10
5. 14
8. 13
9. 4
12. 18
13. 5
14. 8
17. 11
18. 16
19. 15

**Down**
1. 20
2. 0
4. 9
6. 3
7. 19
10. 1
11. 6
15. 12
16. 7
18. 17

The crossword grid answers:

- 1 Across: two
- 1 Down: twenty
- 2 Down: zero
- 3 Across: ten
- 4 Down: nine
- 5 Across: fourteen
- 6 Down: three
- 7 Down: nineteen
- 8 Across: thirteen
- 9 Across: four
- 10 Down: one
- 11 Down: six
- 12 Across: eighteen
- 13 Across: five
- 14 Across: eight
- 15 Down: twelve
- 16 Down: seven
- 17 Across: eleven
- 18 Across: sixteen
- 18 Down: seventeen
- 19 Across: fifteen

**Numbers Word Bank**

| | |
|---|---|
| one | eleven |
| two | twelve |
| three | thirteen |
| four | fourteen |
| five | fifteen |
| six | sixteen |
| seven | seventeen |
| eight | eighteen |
| nine | nineteen |
| ten | twenty |

**LEVEL:**        0.0-1.9

**STANDARD:**        1.0        Demonstrate pre-computational skills

**BENCHMARK**        01.03  Count and associate numbers with quantities, including, recognizing correct number sequencing.

**MATERIALS:**        Boxes and/or labels from food products, file folders, paste or glue, overhead projector, sample label transparency with questions

**PROCEDURE:**        1.  Before class, paste a food label on the inside of each file folder.  On the outside of each file folder, write 3-5 questions about the information on the food label that requires students to read and interpret numbers.

2.  Show a sample label and question on an overhead transparency. Inform students that labels include the following information; weight of item, number of servings in a container, percentage of food contents and number of calories.

3.  Ask students questions about the transparency label to familiarize students with the terminology. Discuss the answers.

4.  Put students in small groups of three and pass out folders. Have students answer questions on a separate sheet of paper.

5.  After all the questions have been answered, the students should arrange the answers in sequence from the smallest number to the largest number or from the largest number to the smallest number.

3.  Teacher will collect papers and make corrections as needed.

**Sample Questions:**
- How many ounces are in the package?
- How many servings are in the package?
- How many calories are in each serving?
- How much sodium is in each serving?
- Write the answers from the smallest to the largest number.

**LEVEL:**         0.0.-1.9

**STANDARD:**      1.0    Demonstrate pre-computational skills

**BENCHMARK**     01.04  Understand basic concepts, e.g., more, less, same as, above, below, between, in, out, over, and under.

**MATERIALS:**     Basic Concepts Worksheet, two books of each color: red, blue, yellow, one shoe box

**PROCEDURE:**    1.  Illustrate the concepts—more, less, same as, above, below, between, in, out, over, and under—using concrete objects such as books.

- <u>More</u> - Have more of one color (red) book than another (blue).
  *Say: I have more red books.*
- <u>Less</u> - Have less of one color (yellow) book than another (red).
  *Say: I have less yellow books.*
- <u>Same as</u> - Have equal amounts of two colors of books.
  *Say: I have equal amounts of both colors.*
- <u>Above</u> - Stack a red book above a yellow book.
  *Ask: Where is the red book?*
- <u>Below</u> - Stack a yellow book below a red book.
  *Ask: Where is the yellow book?*
- <u>Between</u> - Place a blue book between a red and yellow book.
  *Ask: Where is the blue book?*
- <u>In</u> - Put a book inside of a shoe box.
  *Say: The books are in the box.*
- <u>Out</u> - Take the book out of a shoe box.
  *Ask: Where is the book now?*
- <u>Over</u> - Hold books over the table.
  *Say: The book is over the table.*
- <u>Under</u> - Hold a book under the table.
  *Ask: Where is the book?*

List these words on the board. Explain that these words help us understand basic concepts.

2.  Pass out the worksheet, and have each student complete the exercise.

3.  Check the worksheet as a whole class activity by calling on each person to answer a question. Allow students to use above and over interchangeably. Below and under can also be used interchangeably.

Student: _____     Date: _____

Teacher: _____

# BASIC CONCEPTS WORKSHEET

Directions: Answer the questions using the basic concepts that are provided.  Not all concepts will be used.

| | |
|---|---|
| More | Between |
| Less | In |
| Same as | Out |
| Above | Over |
| Below | Under |

1.   The number 2 comes_____ 1 and 3.

2.   10 is_____ than 25.

3.   8 is the _____ eight.

4.   100 is_____ than 5.

5.   Put your shoes _____ the bed.

6.   The ceiling fan is _____ the table.

7.   When it is very cold the temperature sometimes goes _____ zero.

8.   The horse jumped _____ the fence.

**ANSWER KEY**

# BASIC CONCEPTS WORKSHEET

Directions: Answer the questions using the basic concepts that are provided. Not all concepts will be used.

| | |
|---|---|
| More | Between |
| Less | In |
| Same as | Out |
| Above | Over |
| Below | Under |

1.  The number 2 comes_____between_____ 1 and 3.

2.  10 is_____less_____ than 25.

3.  8 is the _____same as_____ eight.

4.  100 is_____more_____ than 5.

5.  Put your shoes _____under_____ the bed.

6.  The ceiling fan is _____above_____ the table.

7.  When it is very cold the temperature sometimes goes _____below_____ zero.

8.  The horse jumped _____over_____ the fence.

**LEVEL:**        0.0. - 1.9

**STANDARD:**    2.0    Show awareness of the ways numbers are represented and used in the real world

**BENCHMARK**    02.01 Use the first ten ordinal numbers.

**MATERIALS:**    Ordinal Numbers Worksheet, pencils

**PROCEDURE:**

1. Define *ordinal number*.  In common usage, an ordinal number is a word that describes the numerical position of an object, e.g., first, second, third, etc.

2. Review the concept by having the class form a single file line.  Ask questions such as: *(Student name) what is your place in line?* Answer: *I am fifth in line.* Do not ask the students in order.

3. Repeat this procedure until all students have provided an ordinal number.

4. Write the ordinal numbers 1st - 10th on the board as each person states them.  The students may use this as a reference when completing the worksheet.

5. Have students form groups of two or three.  Pass out the Ordinal Numbers Worksheets; Each student needs to complete one worksheet.

Student Name: _____    Date: _____

Teacher: _____

# ORDINAL NUMBERS WORKSHEET

Directions: Tell what order the people are in using ordinal numbers first-tenth.
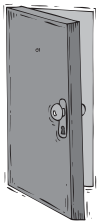
**Kayla    Marla    Dondrae    Andrea    Maria    Carlos    John    Kalina    Alan    Sara**

a.    Carlos is the _____ person in line.

b.    Kayla is the _____ person in line.

c.    Sara is the _____ person in line.

d.    Marla is the _____ person in line.

e.    Kalina is the _____ person in line.

f.    Andrea is the _____ person in line.

g.    John is the _____ person in line.

h.    Dondrae is the _____ person in line.

i.    Alan is the _____ person in line.

j.    Maria is the _____ person in line.

# ORDINAL NUMBERS WORKSHEET

Directions: Tell what order the people are in using ordinal numbers first-tenth.

**Kayla**   **Marla**      **Dondrae**   **Andrea**   **Maria**   **Carlos**   **John**   **Kalina**   **Alan**   **Sara**

a.   Carlos is the _____6th_____ person in line.

b.   Kayla is the _____1st_____ person in line.

c.   Sara is the _____10th_____ person in line.

d.   Marla is the _____2nd_____ person in line.

e.   Kalina is the _____8th_____ person in line.

f.   Andrea is the _____4th_____ person in line.

g.   John is the _____7th_____ person in line.

h.   Dondrae is the _____3rd_____ person in line.

i.   Alan is the _____9th_____ person in line.

j.   Maria is the _____5th_____ person in line.

**LEVEL:**        0.0.-1.9

**STANDARD:**     2.0    Show awareness of the ways numbers are represented and used in the real world

**BENCHMARK**    02.02 Understand and apply the concepts of counting by 2s, 5s, and 10s.

**MATERIALS:**    Multiplication chart, overhead projector, Multiplcation Chart Transparency, over head transparency marker

**PROCEDURE:**    1.  Introduce counting by 2s, 5s, and 10s through the multiplication chart.

                        2.  Pass out the Multiplication Chart worksheet to each student.

                        3.  Instruct students to work in small groups to fill in the chart as you fill in a chart on the overhead projector.  Have students look for the patterns in the numbers, and discuss these patterns with them.  For example: When filling in the number columns, each cell increases by the number at the top.  Each cell in the one's column increases by one until the bottom row, each cell in the two's column increases by two until the bottom row, etc.

                        4.  Point out to the students the importance of counting by 2s, 5s, and 10s. Counting by 2s helps to count objects faster.  Also, seeing if numbers are even helps with division and reducing fractions.  Counting by 5s helps in telling time.  Counting by 10s helps in counting money, adding, etc.

Student: _____   Date: _____

Teacher: _____

# Multiplication Chart

**Directions:** Write a number in each cell

|     | 0  | 1  | 2 | 3  | 4  | 5 | 6  | 7  | 8  | 9   | 10 | 11  | 12  |
|-----|----|----|---|----|----|---|----|----|----|-----|----|-----|-----|
| 0   | 0  | 0  |   | 0  | 0  |   | 0  | 0  | 0  | 0   |    | 0   | 0   |
| 1   | 0  | 1  |   | 3  | 4  |   | 6  | 7  | 8  | 9   |    | 11  | 12  |
| 2   | 0  | 2  |   | 6  | 8  |   | 12 | 14 | 16 | 18  |    | 22  | 24  |
| 3   | 0  | 3  |   | 9  | 12 |   | 18 | 21 | 24 | 27  |    | 33  | 36  |
| 4   | 0  | 4  |   | 12 | 16 |   | 24 | 28 | 32 | 36  |    | 44  | 48  |
| 5   | 0  | 5  |   | 15 | 20 |   | 30 | 35 | 40 | 45  |    | 55  | 60  |
| 6   | 0  | 6  |   | 18 | 24 |   | 36 | 42 | 48 | 54  |    | 66  | 72  |
| 7   | 0  | 7  |   | 21 | 28 |   | 42 | 49 | 56 | 63  |    | 77  | 84  |
| 8   | 0  | 8  |   | 24 | 32 |   | 48 | 54 | 64 | 72  |    | 88  | 96  |
| 9   | 0  | 9  |   | 27 | 36 |   | 54 | 61 | 72 | 84  |    | 99  | 108 |
| 10  | 0  | 10 |   | 30 | 4  |   | 60 | 70 | 80 | 90  |    | 110 | 120 |
| 11  | 0  | 11 |   | 33 | 44 |   | 66 | 77 | 88 | 99  |    | 121 | 132 |
| 12  | 0  | 12 |   | 36 | 48 |   | 72 | 84 | 96 | 108 |    | 132 | 144 |

**ANSWER KEY**

# Multiplication Chart

**Directions:** Write a number in each cell

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | **0** | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** | 0 | 0 |
| 1 | 0 | 1 | **2** | 3 | 4 | **5** | 6 | 7 | 8 | 9 | **10** | 11 | 12 |
| 2 | 0 | 2 | **4** | 6 | 8 | **10** | 12 | 14 | 16 | 18 | **20** | 22 | 24 |
| 3 | 0 | 3 | **6** | 9 | 12 | **15** | 18 | 21 | 24 | 27 | **30** | 33 | 36 |
| 4 | 0 | 4 | **8** | 12 | 16 | **20** | 24 | 28 | 32 | 36 | **40** | 44 | 48 |
| 5 | 0 | 5 | **10** | 15 | 20 | **25** | 30 | 35 | 40 | 45 | **50** | 55 | 60 |
| 6 | 0 | 6 | **12** | 18 | 24 | **30** | 36 | 42 | 48 | 54 | **60** | 66 | 72 |
| 7 | 0 | 7 | **14** | 21 | 28 | **35** | 42 | 49 | 56 | 63 | **70** | 77 | 84 |
| 8 | 0 | 8 | **16** | 24 | 32 | **40** | 48 | 54 | 64 | 72 | **80** | 88 | 96 |
| 9 | 0 | 9 | **18** | 27 | 36 | **45** | 54 | 61 | 72 | 84 | **90** | 99 | 108 |
| 10 | 0 | 10 | **20** | 30 | 4 | **50** | 60 | 70 | 80 | 90 | **100** | 110 | 120 |
| 11 | 0 | 11 | **22** | 33 | 44 | **55** | 66 | 77 | 88 | 99 | **110** | 121 | 132 |
| 12 | 0 | 12 | **24** | 36 | 48 | **60** | 72 | 84 | 96 | 108 | **120** | 132 | 144 |

**LEVEL:**          0.0. - 1.9

**STANDARD:**       3.0     Demonstrate reasonable proficiency in computing addition and subtraction problems

**BENCHMARK**       03.01 Understand and explain the effect of addition on whole numbers.

**MATERIALS:**      Index cards, paper, pencil

**PROCEDURE:**      1.  Write single digit numbers, 1-9, on each card making 2 or 3 sets, depending on class size.

2.  Distribute at random, one card to each student and the teacher keeps one card

3.  Teacher verbally gives his or her number to the first student. The student mentally adds his or her number card to the teacher's number. The student then states this sum on to a neighbor who adds the stated sum to his or her number card and likewise states the sum.

4.  For each row, or after 4 or 5 students start over so the numbers do not get too large for adding. Write down the ending numbers. The teacher should record the ending number from a given set of cards before starting a new round of cards. Repeat this procedure until all student have played. You will need them and the index cards for Benchmark: 03.03

**LEVEL:** 0.0. - 1.9

**STANDARD:** 3.0 Demonstrate reasonable proficiency in computing addition and subtraction problems

**BENCHMARK** 03.02 Solve without regrouping 1- and 2- digit addition problems in both vertical and horizontal notation.

**MATERIALS:** Adding Numbers Worksheet

**PROCEDURE:**
1. Inform the class that they will be practicing 1 and 2 digit addition without regrouping. Write two example problems on the board—one in vertical notation and the other in horizontal notation.

   Ex. 2 + 2 = 4
   $$\begin{array}{r} 2 \\ +2 \\ \hline 4 \end{array}$$

2. Explain to the students that the look of the problem does not matter; they will still add them the same way. Say: *2+2=4 regardless of the way the problem looks.*

   Write the folloiwng examples on the board.
3. Call volunteers to the board to complete the example problems.

   $$\begin{array}{r} 3 \\ +9 \\ \hline \end{array}$$
   10 + 20 = _____
   $$\begin{array}{r} 11 \\ +2 \\ \hline \end{array}$$
   14 + 23 = ____

4. Pass out the Adding Numbers Worksheet to each student and give them approximately 15 minutes to complete.Tell students they may wish to re-write the horizontal problems in a vertical position for ease in computatoin.

5. To check, have volunteers write a problem on the board with the answer he or she derived. If the problem is correct, leave it. If the problem is incor-rect, have the student re-add the numbers. Use manipulative if needed.

**Teaching Tip:**
Teach students when adding 9 to a number, it is easier to mentally add 10 to the number then subtract 1 from that number. Practice with students will be essential for comprehension of this little trick.

Student: _____     Date: _____

Teacher: _____

# ADDING NUMBERS WORKSHEET

Directions: Complete the following problems by adding the vertical or horizontal numbers without regrouping.

1.  5 + 6=               _____

2.   20
    +10
    _____              _____

3.  11 + 7=             _____

4.  3 + 9=              _____

5.   35
    +03
    _____              _____

6.  41 + 22=            _____

7.  9 + 8=              _____

8.  33 + 3=             _____

9.   45
    +04
    _____              _____

10. 42 + 17=            _____

*ANSWER KEY*

# ADDING NUMBERS WORKSHEET

Directions: Complete the following problems by adding the vertical or horizontal numbers without regrouping.

1.  5 + 6=            11

2.    20
     +10
     _____          30

3.  11 + 7=           18

4.  3 + 9=            12

5.    35
     +03
     _____          38

6.  41 + 22=          63

7.  9 + 8=            17

8.  33 + 3=           36

9.    45
     +04
     _____          49

10. 42 + 17=          59

**LEVEL:**     0.0. - 1.9

**STANDARD:**    3.0    Demonstrate reasonable proficiency in computing addition and subtraction problems

**BENCHMARK**    03.03  Understand and explain the effect of subtraction on whole numbers.

**MATERIALS:**    Index cards from Benchmark 03.01

**PROCEDURE:**    

1. Use the single digit index cards from Benchmark 03.01. Write the sum of the numbers from that exercise on one card that the teacher will keep.

2. Distribute at random one card to each student.

3. The teacher verbally gives a number, the sum from the previous activity, from Benchmark 03.01, (or if that activity has not been done, any number large enough that a negative number will not be involved) to the first student in each row. The first student then subtracts his or her number (as printed on the index card) from the teacher's number. The student then states his or her difference on to a neighbor who subtracts his or her number (as printed on the index card) and likewise passes on the difference.

4. Continue this process until all students in the row have subtracted a number and the difference is very small.

5. Repeat this process, but in the reverse direction, this time with each student adding his or her number. If no errors are made, the teacher will receive the number on the card he or she is holding and the number with which the activity was initiated for that row.

**LEVEL:**        0.0. - 1.9

**STANDARD:**      3.0    Demonstrate reasonable proficiency in computing addition and subtraction problems

**BENCHMARK**     03.04  Solve without regrouping 1- and 2- digit subtraction problems in both vertical and horizontal notation.

**MATERIALS:**     Diennes blocks and number lines for each student, access to laminating equipment, Subtracting Numbers Worksheet, pencils

**PROCEDURE:**
1. Inform the class that they will be practicing subtracting 1 and 2 digit numbers without regrouping. Write three example subtraction problems on the board—at least one in vertical notation and one in horizontal notation.

   Ex.   19                               30

         $\underline{-\ 9}$        $23 - 2\ =$ _____     $\underline{-\ 10}$

2. Explain to the students the concepts of *manipulatives.* Manipulatives are real objects that help people understand what they are doing during addition and subtraction. Do not insult the adults you are working with by using manipulatives they could view as toys. Diennes blocks, written lines, or a number line will help adults understand addition and subtraction.
   - Written lines: having students write lines for numbers helps them to understand the substance of mathematic operations. After representing the numbers with lines, the student can count the lines to solve the problem.
   - Diennes blocks: are especially helpful when solving two-digit number problems. To make Diennes blocks, glue centimeter paper to card stock. Cut blocks of 10x10 squares to represent 100; cut 1x10 strips to represent 10; cut individual to represent 1.
   - Number line: Use a number line to show addition (move to right) or subtraction (move to left). Have a large number line laminated for class use and have small laminated number lines available for individual use.

3. Solve each example problem using a different manipulative. Explain that the first number in a number sentence or problem is the amount you begin with. The second number tells how many to take away.

4. Have each student pick the manipulative he or she prefers. Pass out the worksheet to each student.

5. Check the worksheet as a whole class activity; each student providing an answer.

Name_____ Date_____

# One-Centimeter Graph Paper
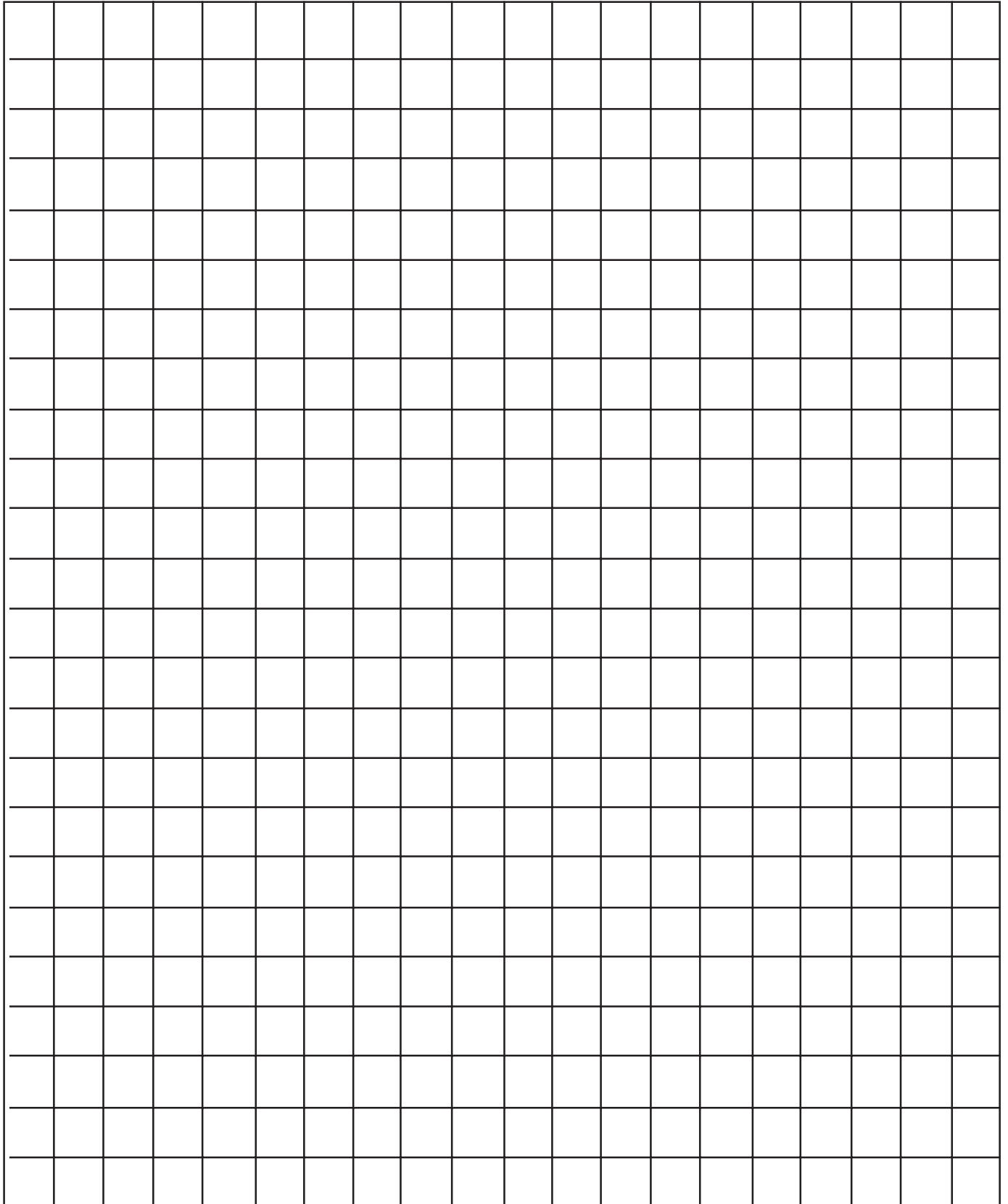
# One-Centimeter Graph Paper

**Directions:** For teacher preparation see lesson step 2

# Positive Number Line

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35
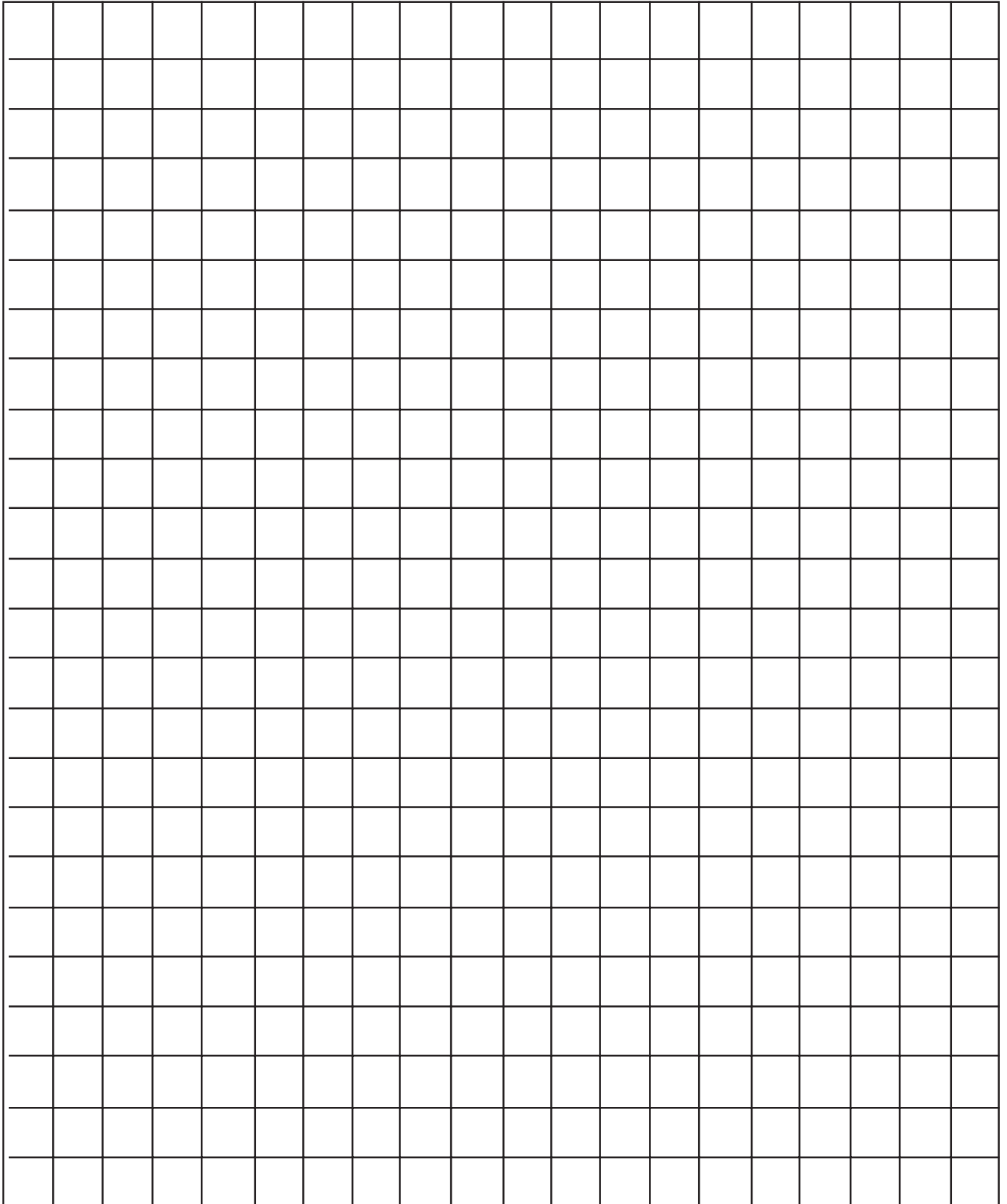
# Positive Number Line

**Directions:** Use the number line to help compute answers.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

Student: _____    Date: _____

Teacher: _____

# SUBTRACTING NUMBERS WORKSHEET

Directions: Solve each subtraction problem using the manipulative of choice.

1.  35 - 1 =                     _____

2.   24 - 2 =                    _____

3.  18 - 12 =                    _____

4.     7
    - 4
    ____                        _____

5.      27
    - 05
    _____                     _____

6.  26 – 16 =                    _____

7.  14 – 3 =                     _____

8.  33 – 12 =                    _____

9.   25
    - 11
    _____                       _____

10. 34
    - 12
    _____                       _____

# SUBTRACTING NUMBERS WORKSHEET

Directions: Solve each subtraction problem using the manipulative of choice.

1.  35 - 1 =      ___34___

2.  24 - 2 =      ___22___

3.  18 - 12 =      ___6___

4.      7
      - 4
      ___          ___3___

5.      27
      - 05
      _____          ___22___

6.  26 – 16 =      ___10___

7.  14 – 3 =      ___11___

8.  33 – 12 =      ___21___

9.    25
      - 11
      ____          ___14___

10.  34
      - 12
      ____          ___22___

**LEVEL:**       0.0 - 1.9

**STANDARD:**    3.0    Demonstrate reasonable proficiency in computing addition and subtraction problems

**BENCHMARK**    03.05  Select the appropriate operation to solve specific problems involving addition and subtraction of whole numbers.

**MATERIALS:**    Number Trail Worksheet, pencils

**PROCEDURE:**

1. Write the examples below to show how different operations yield different results. Explain that although the problems use the same numbers, it is the addition or subtraction sign that yields different results. Use chalk to circle the addition or subtraction symbol in each problem.

   **Tip:** Use colored chalk - pink for addition sign, blue for subtraction sign

   - $3 + 2 = 5$
   - $3 - 2 = 1$
   - $10 + 2 = 12$
   - $10 - 2 = 8$

2. Instruct students to make 2 sets of problems using 2 whole numbers to show that results are dependent on the operation. Students will share their examples with the class.

3. Show more variety of results using 4 whole numbers.

   - $3 + 2 - 1 = 4$
   - $3 + 2 + 1 = 6$
   - $3 - 2 + 1 = 2$
   - $3 - 2 - 1 = 0$
   - $25 + 5 - 10 = 20$
   - $25 + 5 + 10 = 40$
   - $25 - 5 + 10 = 30$
   - $25 - 5 - 10 = 10$

   Circle the addition and subtraction sign in each problem

4. Instruct students to make a set and share it with the class.

5. Pass out the Number Trail Worksheet for students to complete either individually or in small groups.

   **Tip:** Student may want to use a red pen to circle all addition signs and a blue pen to circle all subtraction signs.

**VARIATION:**
- Time the worksheet to see who finishes first.
- Partner work: Student A does #1, Student B checks it and does #2, Student A checks it and does #3, etc.

Student:_____     Date: _____

Teacher: _____

# Number Trail Worksheet

**Directions:** Use an addition or subtraction symbol to complete each number sentence.

**1.**  5       9       = 14

**2.**  23      3       = 26

**3.**  12      6       = 18

**4.**  34      2       = 32

**5.**  18      11      = 7

**6.**  22      6       = 28

**7.**  8       22      = 30

**8.**  17      7       = 10

**9.**  39      11      = 28

**10.** 55      20      = 75

**Directions:** Use addition or subtraction symbols to complete the number sentence.

# BONUS:    4      1    2   = 3

# Number Trail Worksheet

**Directions:** Use an addition or subtraction symbol to complete each number sentence.

1.  $5 + 9 = 14$

2.  $23 + 3 = 26$

3.  $12 + 6 = 18$

4.  $34 - 2 = 32$

5.  $18 - 11 = 7$

6.  $22 + 6 = 28$

7.  $8 + 22 = 30$

8.  $17 - 7 = 10$

9.  $39 - 11 = 28$

10.  $55 + 20 = 75$

**Directions:** Use addition or subtraction symbols to complete the number sentence.

## BONUS:  $4 + 1 - 2 = 3$

**LEVEL:**         0.0 - 1.9

**STANDARD**    3.0     Demonstrate reasonable proficiency in computing addition and subtraction problems

**BENCHMARK**    03.06  Add 1- digit whole numbers to solve real world problems using appropriate methods of computing, e.g., manipulatives, mental mathematics, and paper and pencil.

**MATERIALS:**    1 index card for each student, Choose the Operation worksheet, pencils

**PROCEDURE:**    1.  Discuss with students when it is appropriate to add or subtract and what words to look for to determine which operation is needed.
Ex. "How many in all" means to add, "How many are left "means to subtract

2.  Using students' brainstorming, write a list of math operation words, used for addition.
Ex. How many in all? How many all together? Leave words on board for reference.

3.  Pass out the Choosing the Operation worksheet, and give students approximately 20 minutes to complete it.  Discuss the answers and words that helped determine which operation was needed.

4.  Pass out 1 index card to each student.  Instruct them to write an addition word problem on the card. The teacher will pick up and shuffle cards.

5.  Students will read the card out loud and state which words in the story determined the additional operation.

Student: _____   Date: _____

Teacher: _____

# Choose The Operation

**Directions:** Write an addition problem for each story.

1. _____     Sally needed to bake cakes for a bake sale. She baked 2 cakes on Saturday and 6 cakes on Sunday. How many cakes did she bake?

2. _____     Allen, my grandson, was receiving an allowance of $3 a week before getting a $1 weekly raise. Now, what does Allen receive in allowance each week?

3. _____     In one week, Hosea earned $5 for raking leaves. Then he earned $6 for washing cars. How much did Hosea earn in one week?

4. _____     Jeffery had 1 cat last year at his house and 7 kittens this year. How many cats does he have this year at his house?

5. _____     Mary spent $9 on a new pair of flip flops. She spent $2 on socks. How much money did she spend?

6. _____     Fred had 2 children at his house this morning. Six more children came over after lunch. How many children did Fred have at his house?

7. _____     Carol sold a vase at a garage sale for $5.  She then sold a TV for $9. How much did she make on the deal?

8. _____     It was Nakita's turn to bring in treats for  the office party. She brought 6 donuts, 4 cheese pastries and 3 cinnamon rolls. How many treats did Nakita bring in all?

# Choose The Operation

**Directions:** Write an addition problem for each story.

1. $2 + 6 = 8$     Sally needed to bake cakes for a bake sale. She baked 2 cakes on Saturday and 6 cakes on Sunday. How many cakes did she bake?

2. $\$3 + \$1 = \$4$     Allen, my grandson, was receiving an allowance of $3 a week before getting a $1 weekly raise. Now, what does Allen receive in allowance each week?

3. $\$5 + \$6 = \$11$     In one week, Hosea earned $5 for raking leaves. Then he earned $6 for washing cars. How much did Hosea earn in one week?

4. $1 + 7 = 8$     Jeffery had 1 cat last year at his house and 7 kittens this year. How many cats does he have this year at his house?

5. $\$9 + \$2 = \$11$     Mary spent $9 on a new pair of flip flops. She spent $2 on socks. How much money did she spend?

6. $2 + 6 = 8$     Fred had 2 children at his house this morning. Six more children came over after lunch. How many children did Fred have at his house?

7. $\$5 + \$9 = \$14$     Carol sold a vase at a garage sale for $5.  She then sold a TV for $9. How much did she make on the deal?

8. $6 + 4 + 3 = 13$     It was Nakita's turn to bring in treats for  the office party. She brought 6 donuts, 4 cheese pastries and 3 cinnamon rolls. How many treats did Nakita bring in all?

**LEVEL:**          0.0 - 1.9

**STANDARD:**          3.0     Demonstrate reasonable proficiency in computing addition and subtraction problems

**BENCHMARK:**          03.07  Add a column of three 1- digit numbers.

**MATERIALS:**          Column Addition worksheet

**DIRECTIONS:**          1.  Review previously learned addition rules.

2. Inform students that they are now going to learn to add a column of three 1 digit numbers.  Write this example on the board in vertical notation:

$$\begin{array}{r} 2 \\ + \quad 4 \\ \underline{5} \end{array}$$

3. The first step is to add the first 2 digits.  Ask: *What is 2 + 4 =?*  The last step in solving this problem is to add the 3rd digit.  Ask: *What is 6 + 5 =?*
**Teacher Tip:** Teacher may want to draw a visual aid  next to the problem to help with computation.
ex.

$$\begin{array}{r} 2 \\ + \quad 4 \\ \underline{5} \end{array} \quad 6$$

Write steps on the board. Students may want to use the steps for furture reference. Step one: Add the first 2 digits; Step two: Add the 3rd digit.

4. Write more sample problems on the board

$$\begin{array}{r} 1 \\ + 5 \\ \underline{4} \end{array} \qquad \begin{array}{r} 2 \\ + 6 \\ \underline{1} \end{array} \qquad \begin{array}{r} 7 \\ + 0 \\ \underline{5} \end{array}$$

5. Calling on student volunteers to solve additional example problems.  The students must recite the steps aloud as the teacher has modeled for them.

6. Pass out Column Addition Worksheet.  Students may work individually or in pairs.

Student: _____     Date: _____

Teacher: _____

# COLUMN ADDITION WORKSHEET

Directions: Complete the following problems by adding the three 1 digit numbers.

1.    5
      6
   +2

2.    4
      7
   +1

3.    2
      8
   +1

4.    3
      3
   +3

5.    1
      9
   +7

6.    1
      2
   +3

7.    5
      9
   +1

8.    7
      2
   + 4

# COLUMN ADDITION WORKSHEET

Directions: Complete the following problems by adding the three 1 digit numbers.

1.    5
      6
    +2
    13

2.    4
      7
    +1
    12

3.    2
      8
    +1
    11

4.    3
      3
    +3
    9

5.    1
      9
    +7
    17

6.    1
      2
    +3
    6

7.    5
      9
    +1
    15

8.    7
      2
    + 4
    13

**LEVEL:** 0.0 - 1.9

**STANDARD:** 3.0 Demonstrate reasonable proficiency in computing addition and subtraction problems

**BENCHMARK:** 03.08 Recall addition facts using a number line, table, or memory.

**MATERIALS:** Addition Facts Table Worksheet, pencils

**PROCEDURE:**
1. Review the definition of *addition.* Addition is adding numbers together to find how many you have in all.

2. Orally practice some of the addition rules. Ask individual students questions like: What is 3 + 5? or what is 4 + 9?

3. Inform the class that they will continue to practice the addition rules using the Addition Fact Table Worksheet.

4. Pass out the worksheet to the students. Show students how to fill out the chart by completing several scattered problems. The table may be completed individually or in pairs. Allow students to use a number line or other manipulatives if needed.

5. Encourage students to keep the chart for future use.

**VARIATION:** Exercise may be timed.

Student: _____     Date: _____

Teacher: _____

# Addition Facts Table Worksheet

**Directions:** Use addition rules to complete the addition facts table

| + | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|----|----|----|
| 1 | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | |

# Addition Facts Table Worksheet

**Directions:** Use addition rules to complete the addition facts table

| + | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |

**LEVEL:**        0.0 - 1.9

**STANDARD:**    3.0    Demonstrate reasonable proficiency in computing addition and subtraction problems

**BENCHMARK:**    03.09  Recall subtraction facts using a number line, table, or memory.

**MATERIALS:**    Subtraction Facts Table Worksheet, Addition Facts Worksheet, Positive Numberline Worksheet

**PROCEDURE:**

1. Review the definition of *subtraction.* Subtraction is taking one number away from another number to find how many you have left.

2. Orally practice some of the subtraction rules. Ask individual students questions like: What is 5 - 3, or what is 9 - 4? Ask students which number should be subtracted or taken away?

3. Show students how to use Addition Facts Sheet in benchmark 03.08 to do subtraction.

4. Show students how to use the number line in benchmark 03.04 to do subtraction.

5. Pass out the worksheet to the students. The problems may be completed individually or in pairs with the use of the Addition Fact Sheet or other manipulatives.

**VARIATION:**    Exercise may be timed.

Student: _____     Date: _____

Teacher: _____

# Subtraction Facts Table Worksheet

**Directions:** Use subtraction to solve each problem.

| | | | | | | |
|---|---|---|---|---|---|---|
| 9 − 6 | 5 − 5 | 3 − 0 | 2 − 1 | 5 − 4 | 1 − 0 | 8 − 8 |
| 7 − 1 | 8 − 3 | 9 − 5 | 4 − 2 | 6 − 4 | 5 − 3 | 9 − 8 |
| 4 − 1 | 8 − 6 | 9 − 3 | 6 − 5 | 5 − 1 | 2 − 2 | 8 − 4 |
| 7 − 3 | 6 − 2 | 4 − 3 | 5 − 2 | 9 − 0 | 8 − 7 | 7 − 6 |
| 3 − 2 | 4 − 4 | 6 − 3 | 4 − 0 | 6 − 0 | 8 − 5 | 3 − 3 |
| 2 − 0 | 8 − 2 | 9 − 4 | 0 − 0 | 8 − 1 | 7 − 4 | 9 − 6 |
| 7 − 7 | 7 − 5 | 1 − 1 | 6 − 6 | 7 − 0 | 9 − 1 | 7 − 0 |
| 9 − 9 | 7 − 2 | 9 − 2 | 3 − 1 | 4 − 3 | 5 − 0 | 9 − 7 |
| 9 − 1 | | | | | | |

**ANSWER KEY**

# Subtraction Facts Table Worksheet

**Directions:** Use subtraction to solve each problem.

| | | | | | | |
|---|---|---|---|---|---|---|
| 9<br>− 6<br>3 | 5<br>− 5<br>0 | 3<br>− 0<br>3 | 2<br>− 1<br>1 | 5<br>− 4<br>1 | 1<br>− 0<br>1 | 8<br>− 8<br>0 |
| 7<br>− 1<br>6 | 8<br>− 3<br>5 | 9<br>− 5<br>4 | 4<br>− 2<br>2 | 6<br>− 4<br>2 | 5<br>− 3<br>2 | 9<br>− 8<br>1 |
| 4<br>− 1<br>3 | 8<br>− 6<br>2 | 9<br>− 3<br>6 | 6<br>− 5<br>1 | 5<br>− 1<br>4 | 2<br>− 2<br>0 | 8<br>− 4<br>4 |
| 7<br>− 3<br>4 | 6<br>− 2<br>4 | 4<br>− 3<br>1 | 5<br>− 2<br>3 | 9<br>− 0<br>9 | 8<br>− 7<br>1 | 7<br>− 6<br>2 |
| 3<br>− 2<br>1 | 4<br>− 4<br>0 | 6<br>− 3<br>3 | 4<br>− 0<br>4 | 6<br>− 0<br>6 | 8<br>− 5<br>3 | 3<br>− 3<br>0 |
| 2<br>− 0<br>0 | 8<br>− 2<br>6 | 9<br>− 4<br>5 | 0<br>− 0<br>0 | 8<br>− 1<br>7 | 7<br>− 4<br>3 | 9<br>− 6<br>3 |
| 7<br>− 7<br>0 | 7<br>− 5<br>2 | 1<br>− 1<br>0 | 6<br>− 6<br>0 | 7<br>− 0<br>7 | 9<br>− 1<br>8 | 7<br>− 0<br>7 |
| 9<br>− 9<br>0 | 7<br>− 2<br>5 | 9<br>− 2<br>7 | 3<br>− 1<br>2 | 4<br>− 3<br>1 | 5<br>− 0<br>5 | 9<br>− 7<br>2 |
| 9<br>− 1<br>8 | | | | | | |

**LEVEL:**        0.0 - 1.9

**STANDARD:**     4.0    Measure quantities in the real world and use the measures to solve problems

**BENCHMARK:**    04.01  Use customary* units, such as, inches, pounds, degrees, and cups to measure real quantities, e.g., measure to the nearest inch on a 12-inch ruler.

**MATERIALS:**    Ruler, ounce scale (used for cooking), measuring cups and spoons, cooking thermometer, hot plate, two quart pot, cocoa, milk, sugar, vanilla, Styrofoam cups

**PROCEDURE:**    1. Discuss the importance of measuring in the real world.  Inform students that they will be given real opportunities for measurement in the classroom to make hot cocoa.

2. Write on the board the instructions for  making hot cocoa (as printed on the label). The directions are as follows:
   - Combine sugar and cocoa in medium saucepan. Gradually stir in 1/3 cup milk to make a smooth paste.
   - Stir in remaining 3 2/3 cups of milk.
   - Warm over medium heat, stirring constantly until hot (do not boil).
   - Remove from heat and stir in vanilla extract. Makes 4 servings.

3. Pass out the Cooking Hot Cocoa worksheet to each student. Instruct the students to complete 1-4 sentences of the worksheet as you fill in the information on the board.

4. Using a scale, ask the students to record an estimate for the weight of cocoa on their worksheet.

5. Record the actual weight of the cocoa can on the board and on the worksheet.

6. Use a ruler to  measure and record the length and width of the cocoa container.

7. Demonstrate how to use measuring cups and spoons to correctly measure and prepare ingredients for hot cocoa.

*Continued*

* Customary refers to the system of measurement used in the United States.

8.  Show the cooking thermometer to the students. Explain that this type of thermometer is different than a thermometer that measures temperature of the air. It measures temperature of liquid. Explain that the recipe cautions not to boil the liquid.

9.  Using the recipe, demonstrate how to make hot cocoa. Place cooking thermometer in pot. Heat mixture until it reaches 115 degrees Fahrenheit (46 degrees Celsius).

10. Serve cocoa.
    **Teacher tip:** *Have enough supplies so that after the lesson you can prepare cocoa for the whole class.*

11. Ask students to answer the remaining questions on the worksheet independently.

Student: _____     Date:  _____

Teacher:  _____

**Directions:** Complete the following sentences:

1. I estimate the can weighs _____ pounds, _____ ounces.

2. The can actually weighs _____ ounces.

3. The can is _____ inches tall.

4. The can is _____ inches wide.

5. Color the thermometer to read 115 degrees Fahrenheit
   (46 degrees Celsius).



6. How many servings does the recipe serve?_____

**LEVEL:**        0.0 - 1.9

**STANDARD:**      4.0    Measure quantities in the real world and use the measures to solve problems

**BENCHMARK:**    04.02  Use and describe basic measurement concepts, e.g., length, weight, digital and analog time, temperature, and capacity.

**MATERIALS:**     Paper bag filled with empty butter dish and marbles, scale, ruler, outside thermometer, Basic Measurement Chart worksheet (5 copies per bag), digital clock, analog clock

**PROCEDURE:**    1. Pass out the paper bags and rulers. Explain that each team will have to share the scale and outside thermometer and that they will use all the materials included in the bag to help them learn how to use measurement in the real world. Students will take each role in the order written on the board.

2. Separate class into groups of 5.  Assign each member one of the following roles: Write the rules on the board for reference.
   - **Capacity Counter** - will count the number of marbles that fit into the container
   - **Measurer** - will measure the length (height) of the container
   - **Weigher** - will measure the weight of the filled container
   - **Temperature Gauger** - will measure the temperature of the classroom
   - **Time Writer** - will record the digital and analog start and end time of the activity.  He or she will write the time from the digital clock and draw the time on the face of a traditional clock.

3. Define *digital* and *analog time*.  Digital time is the time given in numbers. Analog time is the time derived from a clock.

4. Circulate through the classroom ensuring that students are staying focused and measuring accurately.

Student: _____     Date: _____

Teacher: _____

# Basic Measurement Chart

**Directions:** Use basic measurement concepts to record the information.

Time started                                                          _____

Number of marbles that fit in container          _____

Length of container                                            _____

Height of container                                            _____

Temperature of classroom                            _____

Ending time                                                        _____

# Basic Measurement Chart

**Directions:** Use basic measurement concepts to record the information.

Time started                                           _____

Number of marbles that fit in container    _____

Length of container                               _____

Height of container                              _____

Temperature of classroom                _____

Ending time                                       _____

**\* ANSWER KEY:**
**Answers will vary due to differences in size of containers / time and temperature.**

Student: _____     Date: _____

Teacher: _____

# Time Writer Worksheet

**Directions:** Record the digital start and end time of the activity. Draw the time on the face of the
traditional clock.

**Start Time:**

___:___

**End Time:**

___:___
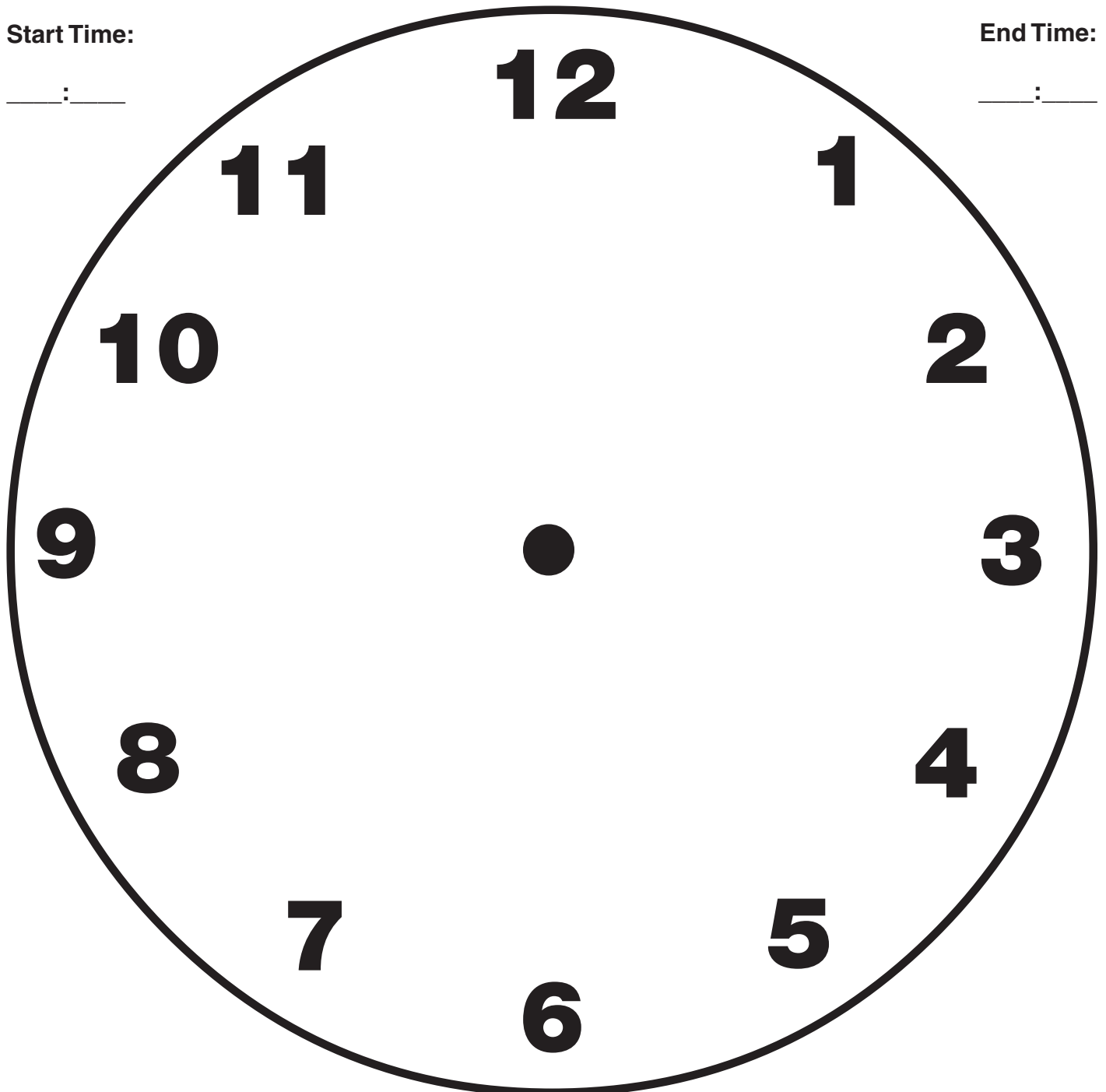
*ANSWER KEY*

# Time Writer Worksheet

**Directions:** Record the digital start and end time of the activity. Draw the time on the face of the traditional clock.

## * Answers will vary

**Start Time:**

____:____

**End Time:**
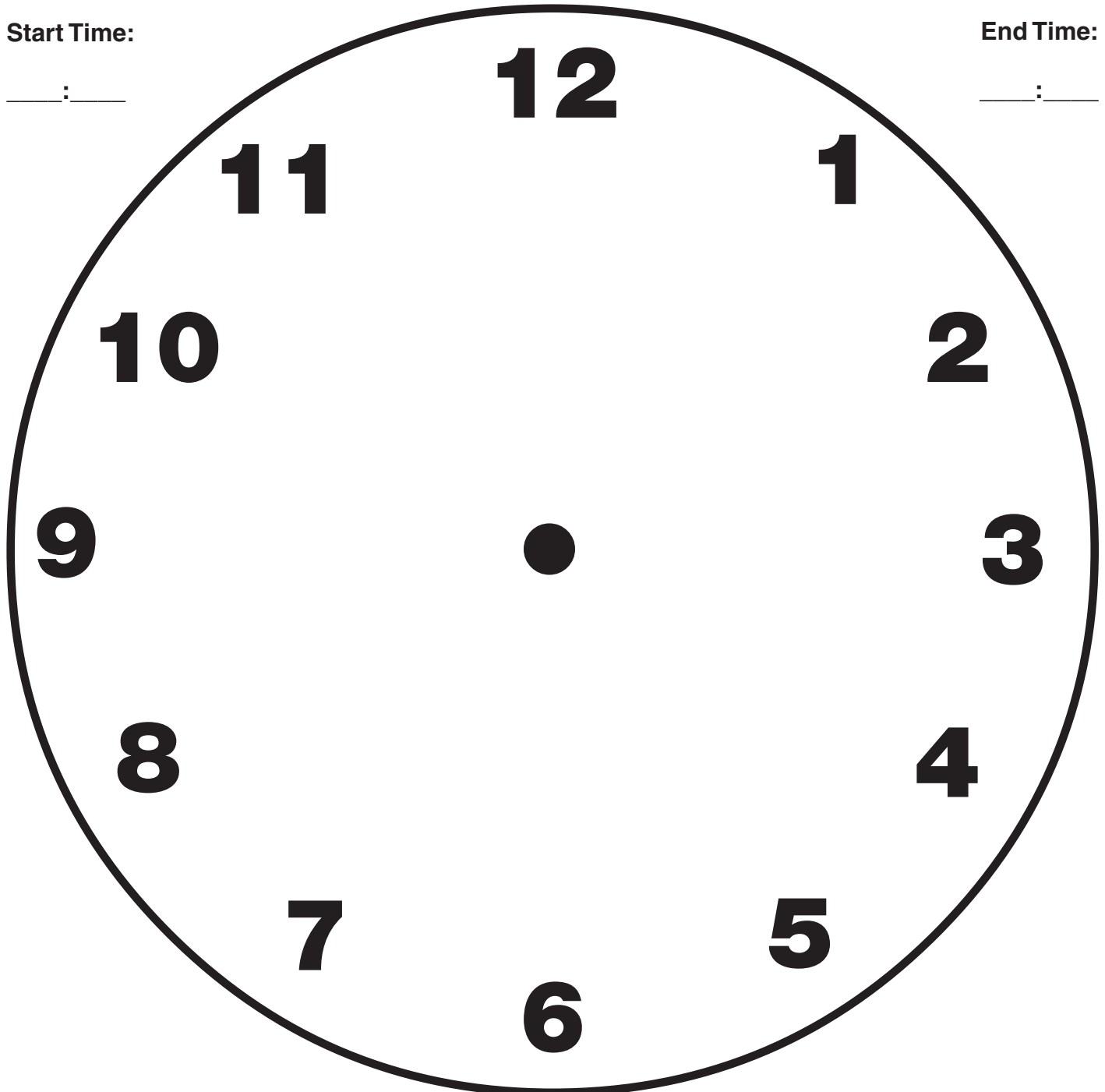
____:____

**LEVEL:**    0.0 - 1.9

**STANDARD:**  4.0  Measure quantities in the real world and use the measures to solve problems

**BENCHMARK:** 04.03 Select and use an appropriate unit of measure.

**MATERIALS:**  Ruler and book, measuring cup and sand, scale and an apple for each student placed in individual bags, Measuring Worksheet

**PROCEDURE:**  1. Review measuring concepts by asking individual students the following questions:
- Why would I use a ruler to measure an object?
- What would I use to measure sugar?
- What information am I looking for if I use a scale to measure an object?

2. Illustrate the use of any of the measuring tools that the students are not comfortable using.

3. Pair students and have them complete the Measuring Worksheet. Pass out bags. Tell them to use the items in the bag to complete the Measuring worksheet

**TEACHING TIP:** The teacher will need to complete the measurements before class to determine the correct answers.  As a treat, allow the students to eat the apples that were brought to class.

Student: _____     Date: _____

Teacher: _____

# MEASURING WORKSHEET

**Directions:** First answer the questions by choosing one of the words below.  Second, using the appropriate tool, measure the substance. Record the measurement.

**Ruler        Measuring cup        Scale**

1. What would one use to measure sand? _____

   • Sand measurement:_____

2. What would one use to measure a book? _____

   • Book measurement:_____

3. What would one use to measure an apple? _____

   • Apple measurement:_____

**Answers will vary**

# MEASURING WORKSHEET

**Directions:** First answer the questions by choosing one of the words below.  Second, using the appropriate tool, measure the substance. Record the measurement.

**Ruler        Measuring cup        Scale**

1. What would one use to measure sand? _____

   • Sand measurement:_____

2. What would one use to measure a book? _____

   • Book measurement:_____

3. What would one use to measure an apple? _____

   • Apple measurement:_____

**LEVEL:**        0.0 - 1.9

**STANDARD:**    4.0    Measure quantities in the real world and use the measures to solve problems

**BENCHMARK:**    04.04  State the date by month, day, and year using a calendar.

**MATERIALS:**    Yearly calendar, unlined paper, markers, star stickers

**PROCEDURE:**

1. Post a class calendar with important long-term dates notated.

2. Have each student design a personal monthly calendar using unlined paper and markers or copy and distribute the calendar provided with this exercise.  Use the star stickers to emphasize important quiz or test dates.  The stickers may be color coded also (blue=quiz; gold=test).

3. Engage in goal setting with each student by instructing him or her to write a personal goal at the bottom of his or her calendar.  Each month, conference with students to evaluate the attainment of these goals.

Student: _____     Date: _____

Teacher: _____

**Directions:** Make a personal monthly calendar. Use stickers to emphasize important dates.

| SATURDAY | | | | | |
|---|---|---|---|---|---|
| □ | □ | □ | □ | □ |
| FRIDAY | □ | □ | □ | □ | □ |
| THURSDAY | □ | □ | □ | □ | □ |
| WEDNESDAY | □ | □ | □ | □ | □ |
| TUESDAY | □ | □ | □ | □ | □ |
| MONDAY | □ | □ | □ | □ | □ |
| SUNDAY | □ | □ | □ | □ | □ |

# ANSWER KEY

**Directions:** Make a personal monthly calendar. Use stickers to emphasize important dates.

| SATURDAY | | | | |
|---|---|---|---|---|
| **FRIDAY** | | | | |
| **THURSDAY** | | | | |
| **WEDNESDAY** | | | | |
| **TUESDAY** | | | | |
| **MONDAY** | | | | |
| **SUNDAY** | | | | |

**LEVEL:** 0.0 - 1.9

**STANDARD:** 4.0 Measure quantities in the real world and use the measures to solve problems

**BENCHMARK:** 04.05 Tell time to the hour and half-hour.

**MATERIALS:** Class schedule, class clock (analog preferably), Student Time Sheet, Read the Clock Worksheet, pencils

**PROCEDURE:**
1. Discuss with students the importance of telling time.

2. Review with student clock skills: How to read a face clock (which has the hour and minute hand) to the hour, half hour and minute.
   Write the current analog time on the board.
   Ask students which number tells the hour. Ask student which number(s) tell the minutes.

3. Make and post a class schedule. Refer to the schedule throughout the day. Any class should be able to use a schedule. Even if there are no officially designated times to work on math or reading skills, there is a specific starting and ending time. There can be a specific break time or a specific clean up time.

4. Have students keep a record of the start and finish times of their personal or small group activities for one day.

5. Appoint someone to be a timekeeper for whole class activities.
   Rotate this responsibility until each student has served in this function.

Student: _____     Date: _____

Teacher: _____

# STUDENT TIME SHEET

| Name of Activity | Start time | End Time |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

## *ANSWER KEY*
# STUDENT TIME SHEET

**Directions:** Write the name of personal or small group activity. Record the starting and ending time including hours and minutes.

**Answers May Vary**

| Name of Activity | Start time | End Time |
|---|---|---|
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Student: _____     Date: _____

Teacher: _____
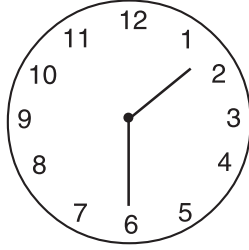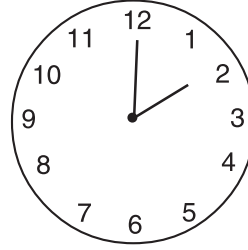
# What Time Is It?

**Directions:** Write the time shown on each clock in the space provided.
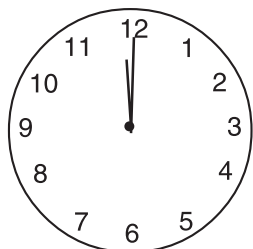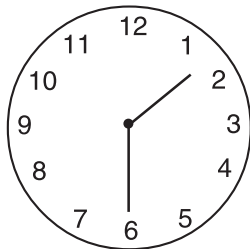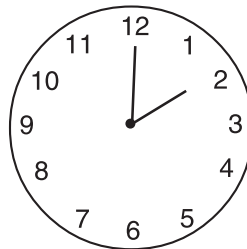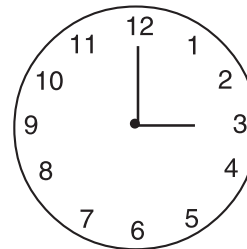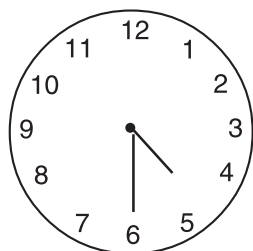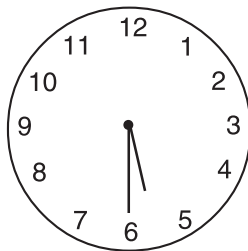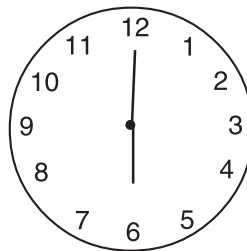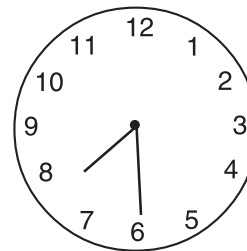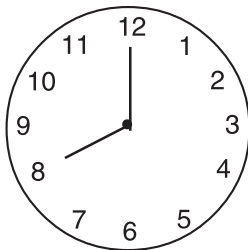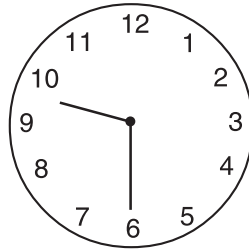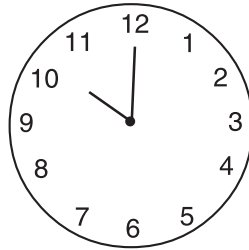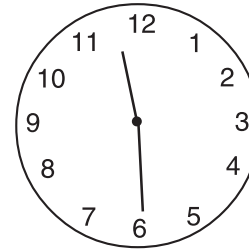
_____     _____     _____     _____

_____     _____     _____     _____

_____     _____     _____     _____

# What Time Is It?

**Directions:** Write the time shown on each clock in the space provided.
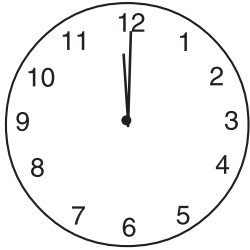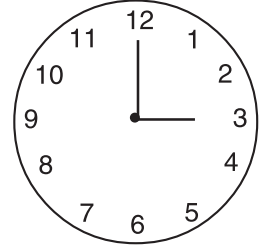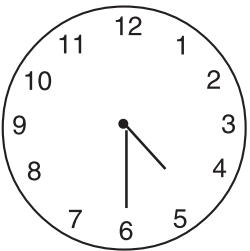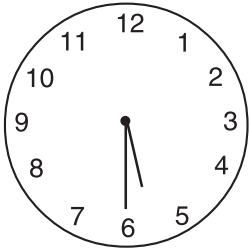
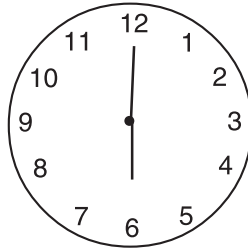| | | | |
|---|---|---|---|
| **12:00** | **1:30** | **2:00** | **3:00** |
| **4:30** | **5:30** | **6:00** | **7:30** |
| **8:00** | **9:30** | **10:00** | **11:30** |
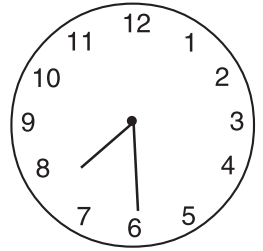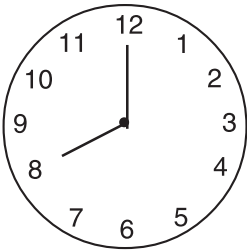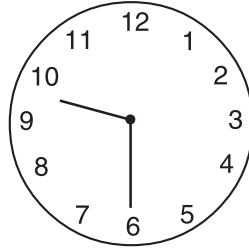
**LEVEL:**          0.0 - 1.9

**STANDARD:**       5.0     Identify two and three dimensional shapes

**BENCHMARK:**      05.01  Identify a square, circle, rectangle, and triangle.

**MATERIALS:**      Graph Paper Worksheet transposed on to an overhead projector,
3-dimensional shapes, overhead projecter and overhead markers
(various colors)

**PROCEDURE:**      1.  Show each of the shapes you need to teach. Then have students vote on
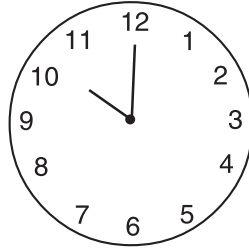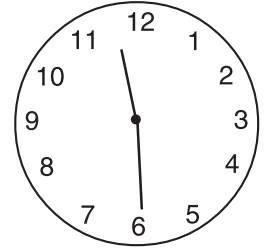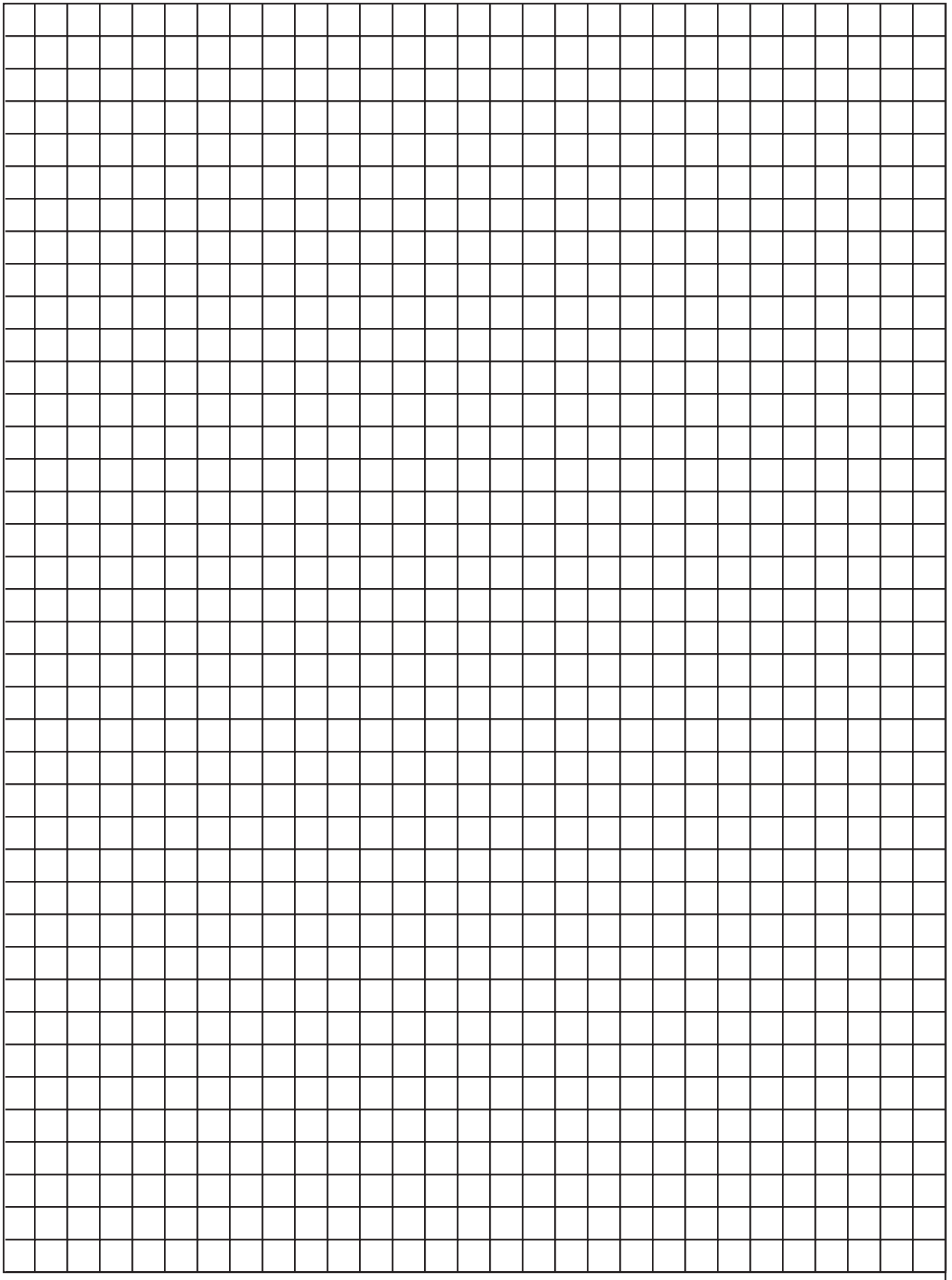their favorites.  Hold up the square and ask who votes for the square so
that you do all the initial naming.  Talk about the properties of the
shapes at this time—number of sides or angles.

2.  Ask students why a particular shape is a favorite.  Also, ask for places this
shape is commonly seen.

3.  Complete the graph to show students the results of your survey about the
class members' favorite shapes.  Keep pointing out the shapes as you add
up the votes and put them on the graph.  Only the teacher will complete
the graph.

4.  Put the shapes and their names on the graph.

**Teaching Tip:**   Teaching shapes to adults might be embarrassing to those who don't know
them.  A way to avoid embarrassment is to teach shapes while you teach
graphing.  This activity teaches shape properties and shape names as well as
graphing skills, but it doesn't require anyone to acknowledge that he doesn't
know the basic shapes.

# Bar Graph Worksheet

**Directions:** For teacher use

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| **shape** | **shape** | **shape** | **shape** | **shape** | **shape** | **shape** |

**LEVEL:**         0.0-1.9

**STANDARD:**     6.0    Solve money problems

**BENCHMARK:**   06.01  Identify coins and currency of different values.

**MATERIALS:**    Coins and currency of all values up to a $20 bill

**PROCEDURE:**   1. Define *currency*.  Currency is money that is in circulation that is used to purchase goods.

2. Identify and briefly discuss unique characteristics of each form of currency from a penny to a twenty dollar bill:
   • **Penny:** worth 1 cent, second smallest coin, made of copper, Lincoln's picture
   • **Nickel:** worth 5 cents, third smallest coin, silver, Jefferson's picture
   • **Dime:**  worth 10 cents, smallest coin, silver, F. Roosevelt's picture
   • **Quarter:** worth 25 cents, largest coin, silver, Washington's picture
   • **$1 dollar bill:** Washington's picture, the first president of the United States.
   • **$5 dollar bill:** Lincoln's picture, the 16th president of the United States
   • **$10 dollar bill:** Alexander Hamilton, the first Secretary of the Treasury of the United States.
   • **$20 dollar bill:** Andrew Jackson's picture, the 7th president of the United States.

3. Discuss how one can manipulate the money to get several results. For example: 4 quarters = one dollar bill; 5 one dollar bills = one five dollar bill; etc.

4. Give a Currency Identification Worksheet once all students have grasped the concept.
   Tell the students they will listen and follow your directions to complete the worksheet.

   Read directions to the class. Pause briefly after each number.

   1. Put a check on the dollar
   2. Draw a happy face above the penny.
   3. Make an X on the $20 bill.
   4. Put a star on the $10 bill.
   5. Circle the quarter.
   6. Draw a box around the $5 bill.
   7. Make a triangle around the dime.
   8. Put a square under the nickle.
   9. Draw a line through the half dollar.

**Teacher Tip:**
Good review of shapes
05.01 and 01.04

Student: _____     Date: _____
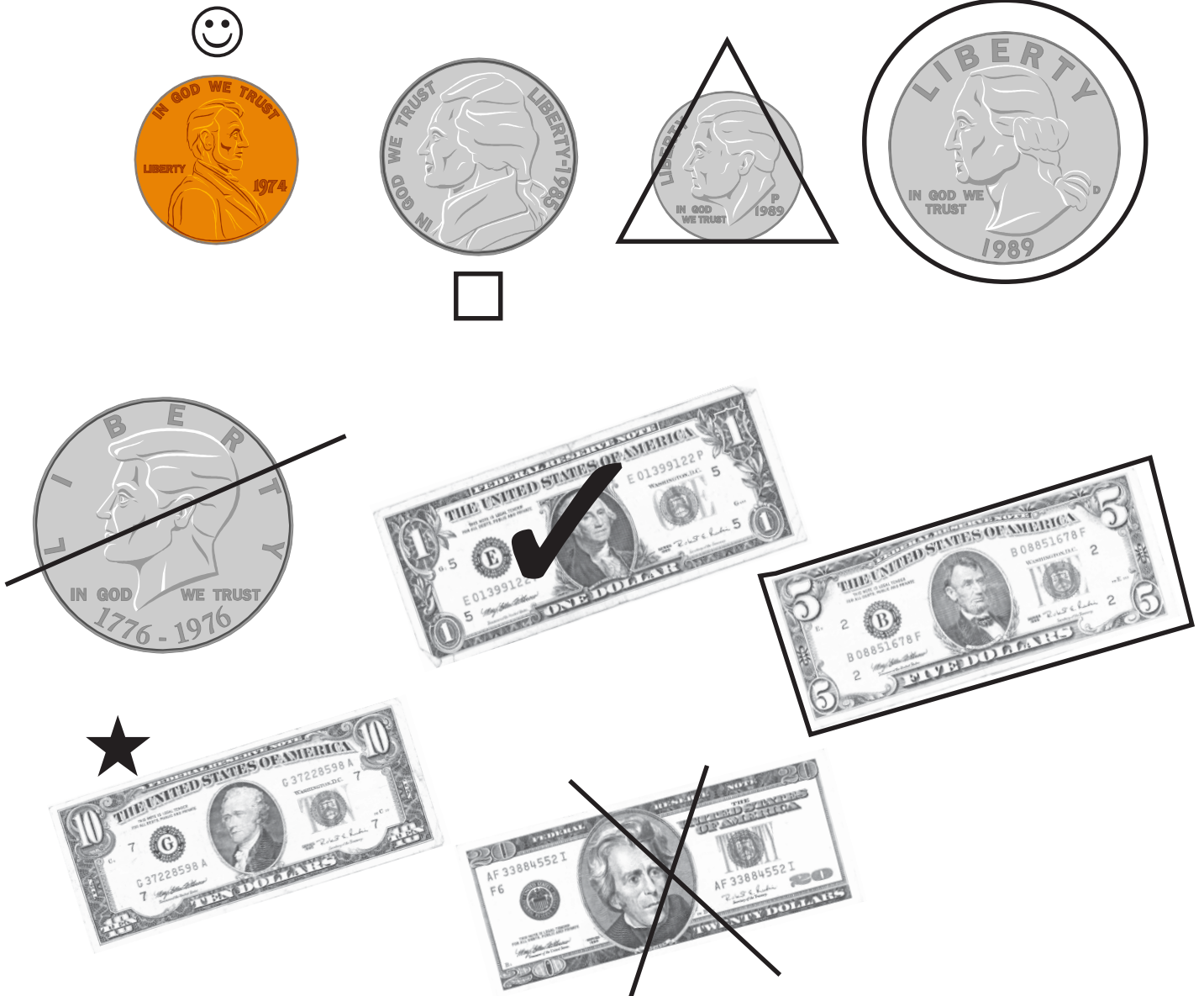
Teacher: _____

# Currency Identification Worksheet

**Directions:** Listen and follow teacher directions.

## ANSWER KEY

# Currency Identification Worksheet

**Directions:** Listen and follow teacher directions.

**LEVEL:**          0.0 - 1.9

**STANDARD:**      6.0     Solve money problems

**BENCHMARK:**    06.02  Identify sets of coins equivalent to 25 cents or less.

**MATERIALS:**     Groups of plastic dimes, nickels, and pennies

**PROCEDURE:**    1.  Review the coin currency names and values.

                    2.  Separate students into groups of 3 or 4.

                    3.  Give each group the following amount of coins:
- 2 dimes
- 5 nickels
- 10 pennies

                    4.  Explain to the class that they will use these coins to come up with different combinations that equal 25 cents. The same combination cannot be used twice.

                    5.  The first team to have 8 combinations will be the champion.

**VARIATION:**

- Give the groups 10 minutes to come up with as many combinations as possible.

- Have the groups form as many combinations as possible under the 25 cents value.

**LEVEL:**        0.0 - 1.9

**STANDARD:**      6.0    Solve money problems

**BENCHMARK:**    06.03  Read and write numerals for money.

**MATERIALS:**     Money Worksheet, pencils

**PROCEDURE:**    
1. Review the various ways to write numerals and words for money (50¢, $1.00, twenty dollars, sixty-five cents)
Write examples on the board for reference.

2. Complete the part one activity individually or as a group.
Make sure each student in the group participates once.

3. Dictate the following amounts of money. Have students write the amounts below in numbers using the proper monetary symbol.

| | | |
|---|---|---|
| 1. ten cents | 2. twenty-five cents | 3. eighty cents |
| 4. eight cents | 5. fifty-six cents | 6. two dollars and fifty cents |
| 7. six dollars | 8. twenty-five dollars | 9. seventy dollars |
| 10. thirty dollars | | |

Student: _____     Date: _____

Teacher: _____

# Money Worksheet

**PART 1.**

### *Directions to Teacher:*

Have the student read aloud the following amounts:

1. 25 ¢     2. 50 ¢     3.   10 ¢     4.  5 ¢     5.  75 ¢

6. $1.00     7. $5.00     8.   $10.00     9. $20.00     10.  $15.00

*Example:* forty-three cents          *Answer:*  43

1. _____ _____          6. _____

2. _____ _____          7. _____

3. _____ _____          8. _____

4. _____ _____          9. _____

5. _____ _____          10. _____

**LEVEL:**        0.0 - 1.9

**STANDARD:**     6.0    Solve money problems

**BENCHMARK:**   06.04  Use addition, without regrouping, to solve real-world problems involving two purchases totaling no more than 50 cents.

**MATERIALS:**    Money Problems Worksheet, Addition Money Problems Worksheet, pencils

**PROCEDURE:**

1. Discuss with students the importance of being able to figure cost mentally. Ask students if they have ever seen anyone in a check out line, when the cashier has given them the total, and they did not have enough money. This is a very embarrassing situation.

2. Practice mental math by asking students the following questions:
   - If one piece of candy costs 16¢ and another piece of candy costs 18¢, will I be able to pay for my candy with two quarters? Will I receive change in return?

   - If I want five pieces of gum and each piece of gum costs 7¢, will I be able to purchase them with 25¢?

3. Continue to practice with the Money Problems Worksheet. Students may work individually or in pairs.

Student: _____    Date: _____

Teacher: _____

# Additional Money Problems Worksheet

Ask the student to solve the following addition problems. The teacher can read problems to the student:

1.  Candy        25¢
    Gum        +10¢
    _____

2.  Newspaper    30¢
    Tax          +5¢
    _____

3.  Crackers     15¢
    Pickle      +20¢
    _____

4.  Drink        40¢
    Chips       +10¢
    _____

5.  Peanuts      15¢
    Popcorn     +30¢
    _____

# Additional Money Problems Worksheet

Ask the student to solve the following addition problems. The teacher can read problems to the student:

1.  Candy     25¢
        Gum     +10¢
            35¢

2.  Newspaper     30¢
        Tax     +5¢
            35¢

3.  Crackers     15¢
        Pickle     +20¢
            35¢

4.  Drink     40¢
        Chips     +10¢
            50¢

5.  Peanuts     15¢
        Popcorn     +30¢
            45¢

Student: _____     Date: _____

Teacher: _____

# MONEY PROBLEMS WORKSHEET

Directions: Using mental math, solve the following money problems.  Be sure to write the answer in correct form.

1.  The pack of Juicy Fruit is 25¢ and the pack of Big Red is 25¢.  How much money will I need to purchase both packs of gum?

2.  Sally is paid by her mother to do chores around the house. If she takes out the trash, Sally will get 15¢ from her mother. If she helps fold the laundry, Sally will get 10¢ from her mother. If she washes the dishes she will get 20¢ from her mother. If Sally washes the dishes and takes out the trash, how much money will Sally get from her mother?

3.  I went to the candy store with my little brother.  He had 50¢ to spend.  If he wanted 5¢ worth of gummy bears, 15¢ worth of Sour Jacks, and 30¢ worth of fudge, would he have enough money to buy all this candy?

# MONEY PROBLEMS WORKSHEET

Directions: Using mental math, solve the following money problems.  Be sure to write the answer in correct form.

1. The pack of Juicy Fruit is 25¢ and the pack of Big Red is 25¢.  How much money will I need to purchase both packs of gum?

**50¢**

2. Sally is paid by her mother to do chores around the house. If she takes out the trash, Sally will get 15¢ from her mother. If she helps fold the laundry, Sally will get 10¢ from her mother. If she washes the dishes she will get 20¢ from her mother. If Sally washes the dishes and takes out the trash, how much money will Sally get from her mother?

**35¢**

3. I went to the candy store with my little brother.  He had 50¢ to spend.  If he wanted 5¢ worth of gummy bears, 15¢ worth of Sour Jacks, and 30¢ worth of fudge, would he have enough money to buy all this candy?

**yes**

**LEVEL:**          0.0 - 1.9

**STANDARD:**     6.0 Solve money problems

**BENCHMARK:**   06.05 Recognize monetary symbols.

**MATERIALS:**    Monetary Symbols Worksheet, pencils, news papers and magazines, scissors

**PROCEDURE:**    1.  Discuss with students the importance of understanding the variety of ways money may be written. Give specific examples of monetary symbols on the board.

                   2.  Provide newspapers, magazines and scissors for students. Ask them to cut out ways money is written in advertisements. Have students share the examples with the class or a small group.

                   3.  Give each student a monetary symbol worksheet to complete. Tell them to listen as you orally read each money amount. Students will write the monetary amount and symbol. Briefly pause after each number

          1.  Fifty cents
          2.  One dollar
          3.  One dollar and twenty-five cents
          4.  Seventy-five cents
          5.  One cent
          6.  Eighty cents
          7.  One hundred dollars
          8.  Twenty-five cents
          9.  One-hundred fifty dollars and thirty cents
          10. Three dollars
          11. Fifty dollars and seventy five cents
          12. Twenty-two cents
          13. Five dollars
          14. Ten cents
          15. One-hundred twenty five dollars and seventy five cents
          16. Four dollars and sixty three cents
          17. Seventy five dollars and fifty cents
          18. Fifteen cents

Student: _____    Date: _____

Teacher: _____

# Monetary Symbols Worksheet

Complete each monetary statement with the correct monetary symbols: $, ¢ and .

| | | |
|---|---|---|
| 50 _____ | 10000 _____ | 500 _____ |
| 100 _____ | 25 _____ | 10 _____ |
| 125 _____ | 15030 _____ | 12575 _____ |
| 75 _____ | 300 _____ | 463 _____ |
| 01 _____ | 5075 _____ | 7550 _____ |
| 80 _____ | 22 _____ | 15 _____ |

# Monetary Symbols Worksheet

Complete each monetary statement with the correct monetary symbols: $, ¢ and .

| | | |
|---|---|---|
| 50¢ | $100.00 | $5.00 |
| $1.00 | $0.25 | 10¢ |
| $1.25 | $150.30 | $125.75 |
| 75¢ | $3.00 | $4.63 |
| $0.01 | $50.75 | $75.50 |
| $0.80 | 22¢ | $0.15 |