Summer greetings everyone!

I am looking forward to teaching your student in 7th grade this August. As I tell the children, you are always learning and using math- you don't finish a unit over fractions and never use them again. This is why a summer math packet is a good way to continually review skills and be ready for the new school year. Here are some things I am requiring with the packet this summer:

*Names need to be written on each worksheet

* All work needs to be shown on loose leaf paper with full heading and shown the way I require in class (a few pages require no work shown-those worksheets have a star on them)

*All loose leaf and worksheets need to be placed in a two-pocket folder and first and last name on the folder

*Folders need to be brought to my room school supply drop off night

*Lastly, the work is meant to be spread out over the summer that way the students are always reviewing.

Have a fabulous summer!

Dorothy Starnes

6th, 7th, and 8th Grade Math

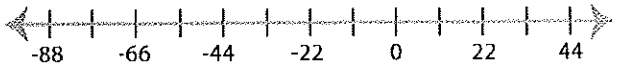
Name : _____ Score : _____

Graphing Inequalities

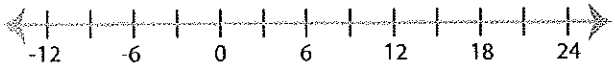
MS1

Graph the inequality :

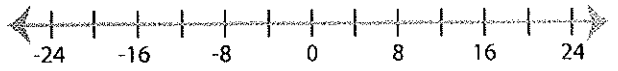
1) $x > -11$



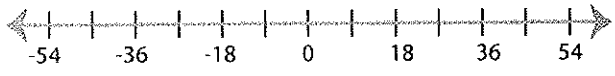
2) $x < 15$



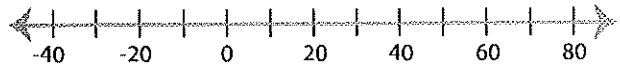
3) $x \leq 12$



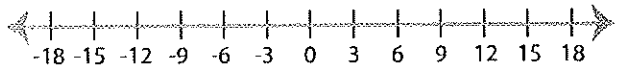
4) $x \geq -27$



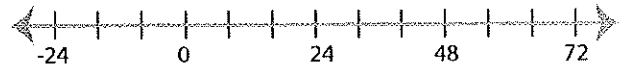
5) $x \geq 20$



6) $x > -6$

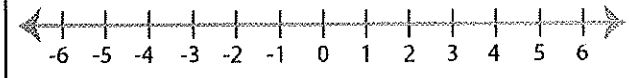


7) $x > 40$

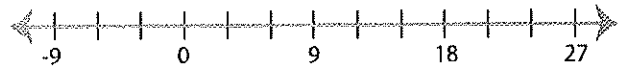


8) $x \geq 6$

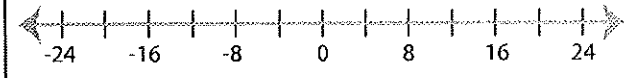
9) $x \geq 1$



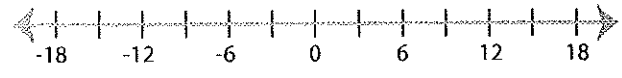
10) $x < 21$



11) $x < -12$



12) $x \leq 3$



Name : _____

Sheet 1

Quadrants & Axes

Check the relevant column for each ordered pair.

Ordered Pair	Quadrant I	Quadrant II	Quadrant III	Quadrant IV	On x-axis	On y-axis
(3, 4)						
(-1, -5)						
(0, 7)						
(-3, 4)						
(-1, -6)						
(5, 0)						
(4, -5)						
(2, 8)						
(-9, 3)						
(-1, -1)						

Name : _____

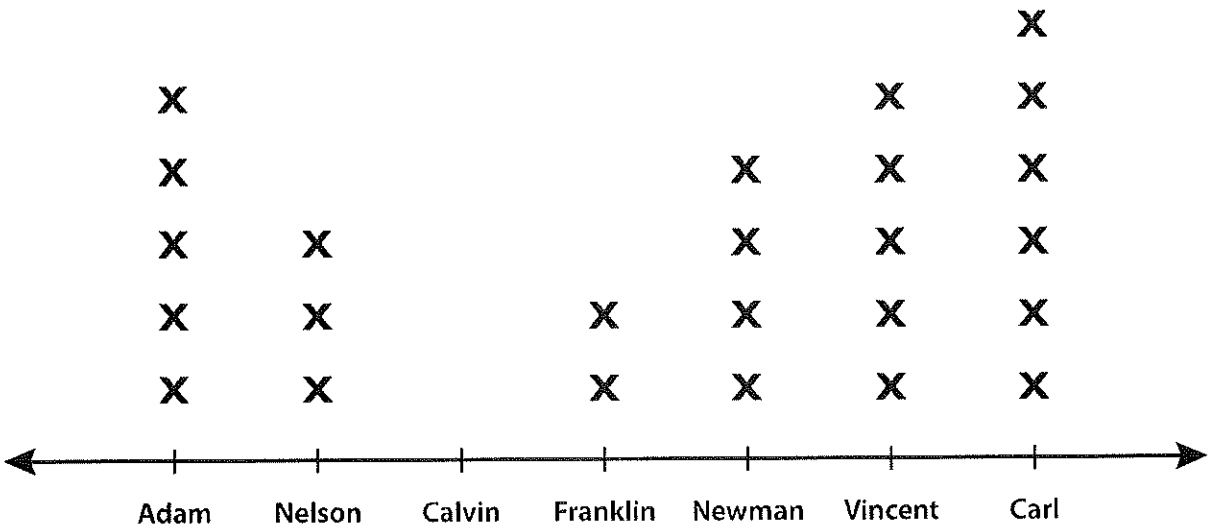
Interpreting Line Plot

CS3

A start-up company has seven marketing executives who have targets set for every month. They receive an incentive of $50 for every target they achieve. The targets achieved by all seven executives over a period of ten months is given below. Read the line plot and answer the questions.

Targets Achieved

X = $50



Employees

1) Who achieved the highest target over the ten month period? _____

2) How much would Vincent earn for the targets he achieved? _____

3) Who earned a higher incentive - Adam or Nelson? _____

4) Which employee will earn $200 for the targets he achieved? _____

5) Name the employees-

   a) Who did not achieve any targets? _____

   b) Who achieved the least number of targets? _____

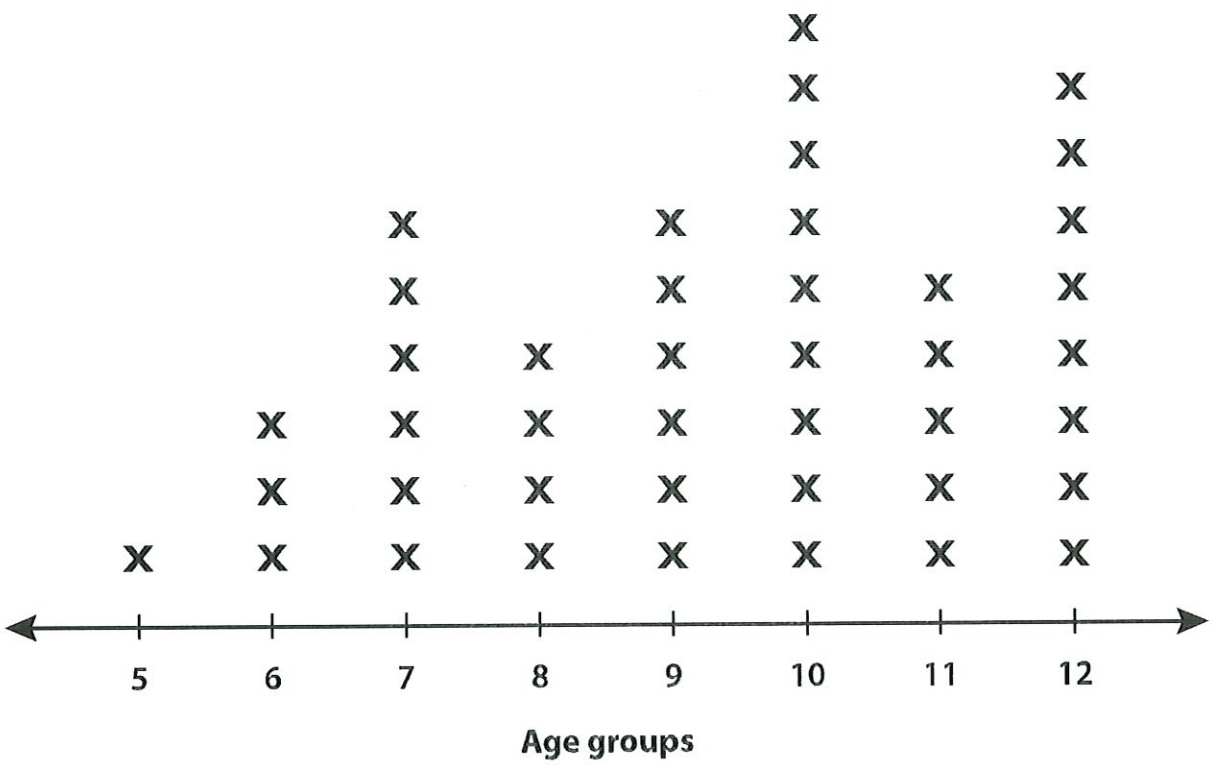
Name : _____

DS3

Interpreting Line Plot

An inter-school tongue twister competition was organized for students between the age group of 5 to 12 years. The plot below displays the number of students who participated in the competition under each age group. Read the plot and answer the questions.

Tongue Twister Competition



1) What is the range of the data? _____

2) How many students were aged 8 and above? _____

3) Determine the mode. _____

4) How many students in all participated in the tongue twister competition? _____

5) Which age category had the least number of participants? _____

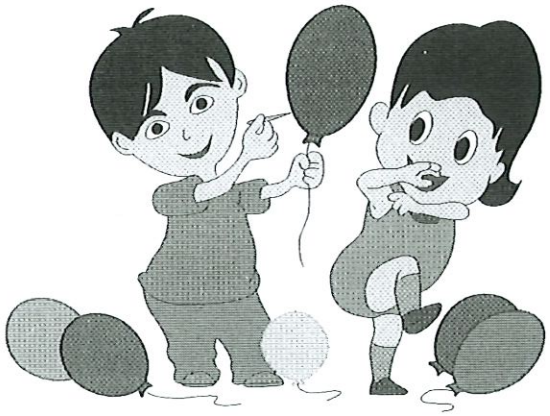
Name : _____

CS3

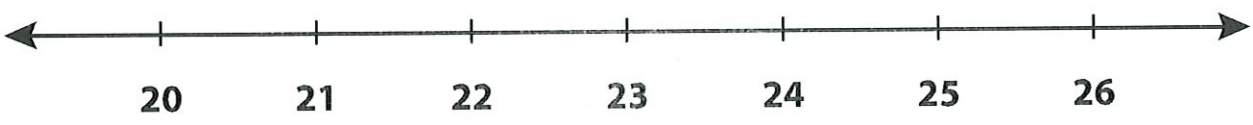
Making a Line Plot

Twenty children participated in a game of balloon pop at a birthday party. The number of balloons popped by each child is recorded and tabulated below. Read the data carefully, label the axes, and provide an appropriate title. Also, make a line plot to represent the data.

26	20	21	22	21
23	21	26	24	25
20	23	24	23	24
20	22	21	21	23



_____



_____

Name : _____

Converting Improper Fractions and Mixed Numbers

Sheet 3

A) Convert each improper fraction to a mixed number.

1) $\frac{75}{8}$ = _____

2) $\frac{33}{4}$ = _____

3) $\frac{48}{11}$ = _____

4) $\frac{8}{3}$ = _____

5) $\frac{52}{9}$ = _____

6) $\frac{11}{6}$ = _____

7) $\frac{9}{7}$ = _____

8) $\frac{89}{12}$ = _____

B) Convert each mixed number to an improper fraction.

1) $9\frac{2}{3}$ = _____

2) $1\frac{3}{5}$ = _____

3) $1\frac{1}{4}$ = _____

4) $6\frac{4}{11}$ = _____

5) $3\frac{4}{9}$ = _____

6) $8\frac{1}{2}$ = _____

7) $5\frac{7}{10}$ = _____

8) $7\frac{5}{6}$ = _____

Name : _____

Adding Proper Fractions

ES1

1) $\frac{2}{3} + \frac{1}{2}$ = _____

2) $\frac{5}{7} + \frac{3}{4}$ = _____

3) $\frac{1}{2} + \frac{3}{5}$ = _____

4) $\frac{1}{6} + \frac{1}{3}$ = _____

5) $\frac{3}{4} + \frac{7}{8}$ = _____

6) $\frac{5}{9} + \frac{1}{2}$ = _____

7) $\frac{1}{3} + \frac{2}{7}$ = _____

8) $\frac{4}{5} + \frac{9}{10}$ = _____

9) $\frac{1}{2} + \frac{5}{12}$ = _____

10) $\frac{4}{11} + \frac{1}{3}$ = _____

11) $\frac{3}{4} + \frac{1}{2}$ = _____

12) $\frac{5}{7} + \frac{5}{8}$ = _____

13) $\frac{3}{5} + \frac{1}{6}$ = _____

14) $\frac{2}{9} + \frac{1}{2}$ = _____

15) $\frac{1}{2} + \frac{4}{11}$ = _____

16) $\frac{5}{6} + \frac{2}{3}$ = _____

Name : _____

Subtracting Proper Fractions

Easy: S1

1) $\frac{2}{3} - \frac{4}{12} =$ ☐

2) $\frac{5}{7} - \frac{3}{5} =$ ☐

3) $\frac{7}{8} - \frac{5}{6} =$ ☐

4) $\frac{3}{4} - \frac{1}{8} =$ ☐

5) $\frac{9}{10} - \frac{3}{4} =$ ☐

6) $\frac{2}{3} - \frac{1}{2} =$ ☐

7) $\frac{6}{7} - \frac{1}{2} =$ ☐

8) $\frac{9}{10} - \frac{3}{5} =$ ☐

9) $\frac{3}{4} - \frac{2}{3} =$ ☐

10) $\frac{8}{9} - \frac{5}{6} =$ ☐

11) $\frac{10}{12} - \frac{7}{9} =$ ☐

12) $\frac{3}{4} - \frac{1}{2} =$ ☐

13) $\frac{7}{8} - \frac{4}{5} =$ ☐

14) $\frac{5}{6} - \frac{1}{3} =$ ☐

Name: _____

Multiplying Two Fractions

Sheet 2

Find the product.

1) $\frac{11}{5} \times \frac{6}{5}$

_____

2) $\frac{3}{7} \times \frac{3}{4}$

_____

3) $\frac{15}{2} \times \frac{8}{12}$

_____

4) $\frac{20}{13} \times \frac{9}{14}$

_____

5) $\frac{2}{10} \times \frac{16}{18}$

_____

6) $\frac{10}{20} \times \frac{5}{4}$

_____

7) $\frac{19}{16} \times \frac{4}{6}$

_____

8) $\frac{1}{3} \times \frac{14}{11}$

_____

Name: _____

Dividing Fractions

Sheet 3

Find the quotient.

1) $\frac{3}{7} \div \frac{13}{14}$

_____

2) $\frac{9}{4} \div \frac{9}{8}$

_____

3) $\frac{8}{3} \div \frac{2}{3}$

_____

4) $\frac{5}{2} \div \frac{9}{7}$

_____

5) $\frac{4}{15} \div \frac{3}{6}$

_____

6) $\frac{1}{3} \div \frac{1}{5}$

_____

7) $\frac{5}{4} \div \frac{1}{2}$

_____

8) $\frac{7}{10} \div \frac{5}{12}$

_____

Name : _____ Score : _____

Circle the numbers

Sheet 4

Circle the possible values that satisfy each inequality.

1) $19 \geq x + 8$

14 7 26 12

2) $24 \geq 4x$

9 5 6 1

3) $x - 10 < 4$

11 9 8 14

4) $\frac{x}{5} \geq 4$

22 27 13 19

5) $5 < 1 + x$

3 15 6 4

6) $10x \geq 20$

15 1 9 11

7) $\frac{x}{7} < 2$

12 9 16 5

8) $27 > 9x$

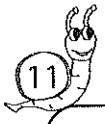
18 2 3 20

9) $3 > \frac{x}{9}$

20 28 26 29

10) $18 \leq 6x$

2 1 4 3



11) $x - 7 \geq 1$

25 4 7 10

12) $6 + x < 13$

8 5 11 6

Name: _____

Writing Equations

Directions: Rewrite each sentence as an equation.

Three times a number is 18.	Sixty less than a number is 32.
Four times a number is 36.	Sixteen divided by a number 4.
The product of 6 and a number is 72.	Nine times a number is 81.
Eight decreased by a number is 2.	A number minus 8 is 17.

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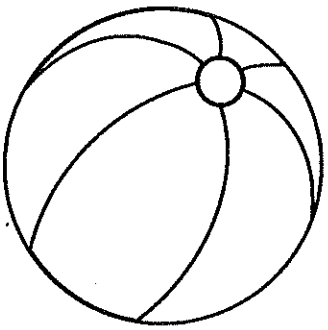
Name: _____

Solve each equation.



$(3 + 1)^3 =$ _____

$3^2 + 5^2 =$ _____

$(2 + 5)^3 =$ _____

$3^2 + 2^3 =$ _____

$(4 + 2)^2 =$ _____

$(5 - 1)^3 =$ _____

$2^4 - 10 =$ _____

$2^2 + 4^2 =$ _____

$(2 + 2)^3 - 3 =$ _____

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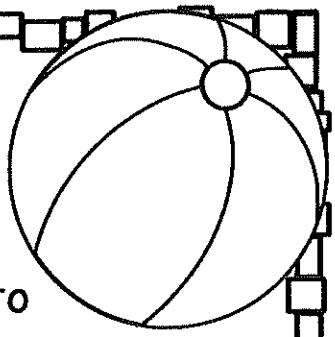
Name: _____

Simplifying Expressions



Directions: Use the order of operations to simplify each expression.

(10 x 9) ÷ 15	
(32 ÷4) + (10-9)	
27 - (6x4)	
(7 x 8) ÷ 2 + 6	
(42÷6) x 9	
(9+6) x (18-5)	
10.8 ÷ (5 + 4)	
2.4 (5 x 4.8 – 2.9)	

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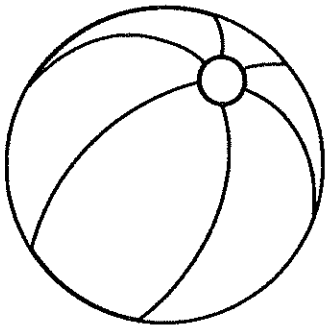
Name: _____

Solve each equation.



$5 \times (5-3) =$ _____

$20 - 4 \times 3 =$ _____

$(7 \times 8) - (4 \times 9) =$ _____

$20 \div 2 \times 5 =$ _____

$84 \div (8 + 6) \div 3 =$ _____

$(2 \times 5) \times 4 =$ _____

$(7 - 3) \times 4 =$ _____

$16 \div (12 - 4) =$ _____

$7 \times 3 + 2 =$ _____

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Name: _____

Use >, < or =

Directions: Compare each set of numbers. Use the correct sign.

2		-2
-7		12
8		-10
9		6
2		-2
0		-4

3		7
6		-4
-5		-6
-12		-1
-12		-10
13		-13

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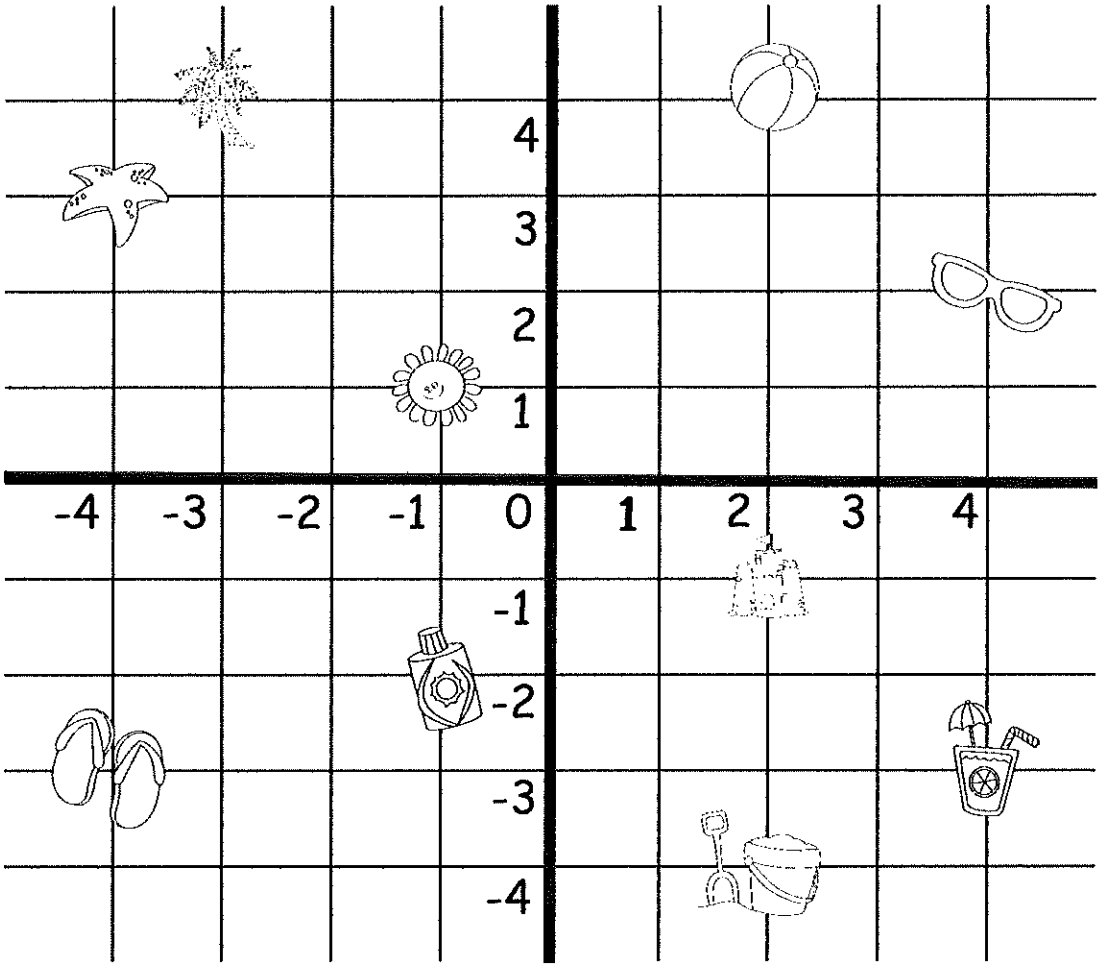
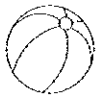
Ordered Pairs



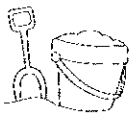
Identify the location of each picture by writing the ordered pair.

1. = (____, ____)

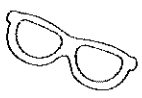
2.  = (____, ____)

3. = (____, ____)

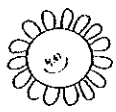
4. = (____, ____)

5.  = (____, ____)

6. = (____, ____)

7.  = (____, ____)

8. = (____, ____)

9.  = (____, ____)

10. = (____, ____)

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Name: _____

Dividing Multiples of 10 and 100

36 ÷ 6 =	360 ÷ 6 =	3,600 ÷ 6 =
56 ÷ 7 =	560 ÷ 7 =	5,600 ÷ 7 =
25 ÷ 5 =	250 ÷ 5 =	2,500 ÷ 5 =
24 ÷ 6 =	240 ÷ 6 =	2,400 ÷ 6 =
81 ÷ 9 =	810 ÷ 9 =	8,100 ÷ 9 =
64 ÷ 8 =	640 ÷ 8 =	6,400 ÷ 8 =
42 ÷ 6 =	420 ÷ 6 =	4,200 ÷ 6 =

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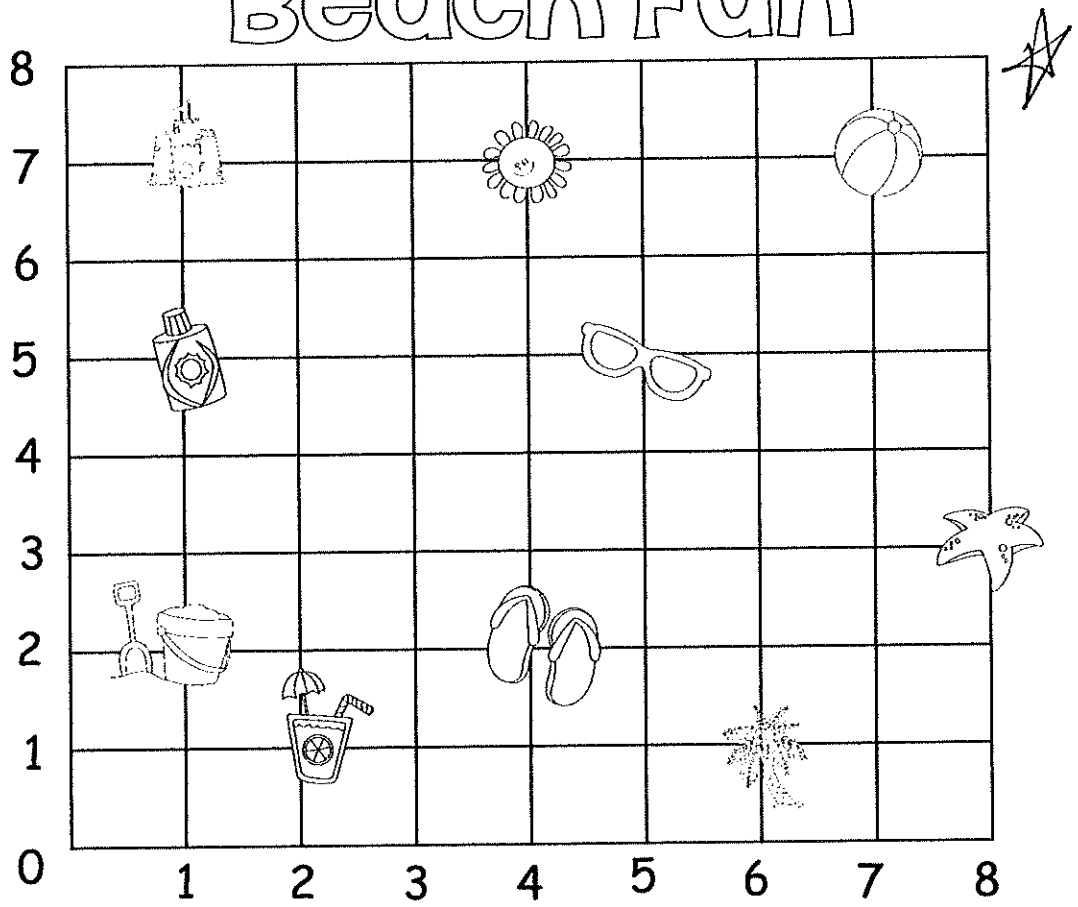
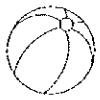
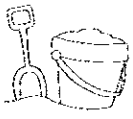
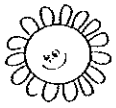
Ordered Pairs
Beach Fun



Identify the location of each picture by writing the ordered pair:

1. = (____, ____)
2.  = (____, ____)
3. = (____, ____)
4. = (____, ____)
5.  = (____, ____)
6. = (____, ____)
7. = (____, ____)
8. = (____, ____)
9.  = (____, ____)
10. = (____, ____)

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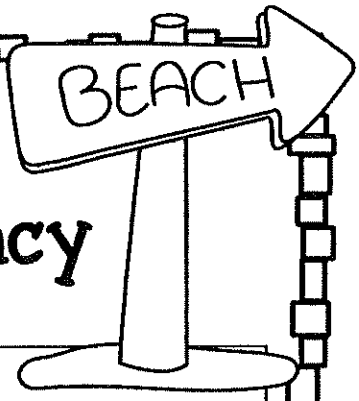
Name: _____

Measures of Central Tendency



8, 12, 23, 12, 15	mean median mode range
52, 61, 79, 78, 56, 79, 71	mean median mode range
37, 50, 67, 83, 84, 48, 37	mean median mode range

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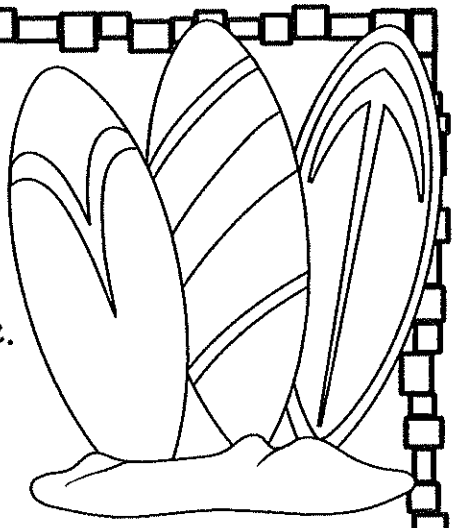
Name: _____

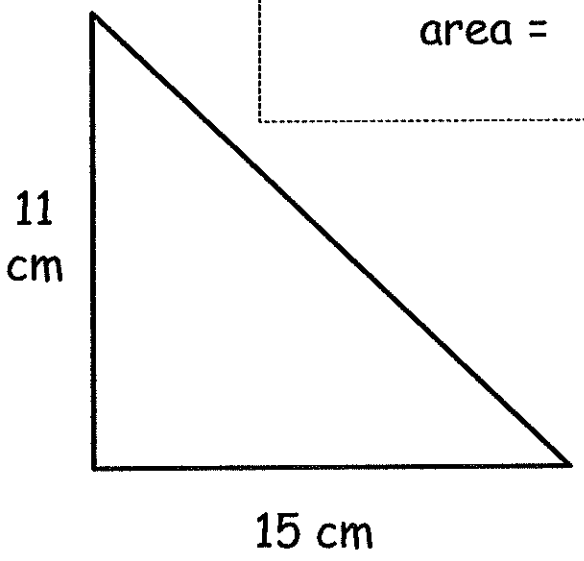
Finding Area



Directions: Determine the area of each triangle.

$A = \frac{1}{2} \times b \times h$

area =



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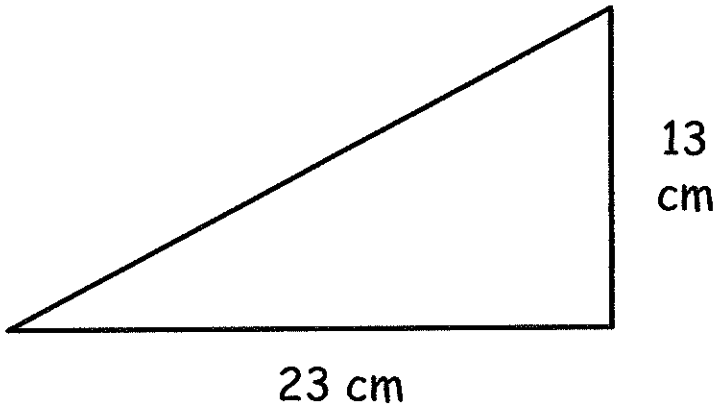

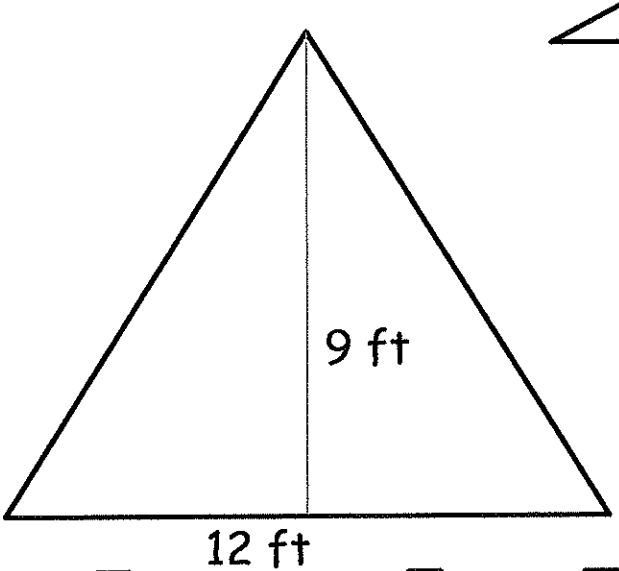

area =

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NAME_____

Why do weeping willows weep?

DIRECTIONS: Solve each of the problems. Find your answer in the decoder and each time it occurs write the letter of the problem above it.

Find the median(middle number)

1. 3.6, 3.9, 4.2, 2.5, 6.7 _____(f)
2. 10.34, 10.56, 10.21, 10.84, 10.57 _____ (h)
3. 1.0321, 1.6784, 1.0341, 1.1421, 1.0093 _____(y)

Find the mean(average)

7. 76, 54, 97, 83, 61 _____(l)
8. 10.3, 10.9, 10.6, 10.1, 10.5 _____(t)
9. 146, 148, 149, 162, 184, 189_____(r)

Find the mode(occurs most often)

4. 67, 67, 68, 69, 30, 45, 81 _____(s)
5. 1.43, 1.41, 1.41, 1.4, 1.41, 1.43, _____ (o)
6. 5.6, 5.7, 5.8, 5.7, 5.3 _____ (e)

Lisse's Math Test Scores	
97	96
98	97
84	89
85	92
88	

Use the table to answer these questions

10. What is the median of Lisse's scores? _____(a)
11. What is the mode of her scores? _____(n)
12. What is the mean? _____(i)
13. If Lisse needs to average 90 for an "A", how many points above 90 is her average?_____(p)

10.48	10.56	5.7	1.0341

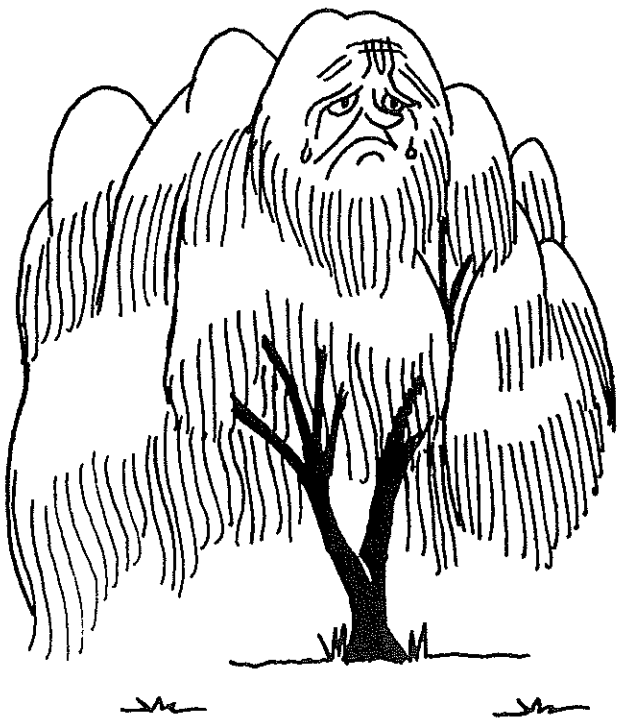
3.9	5.7	5.7	74.2	3.9	1.41	163

10.48	10.56	5.7	1.8	91.8	97	5.7

10.48	163	5.7	5.7	67

10.48	10.56	92	10.48

1.8	91.8	97	5.7



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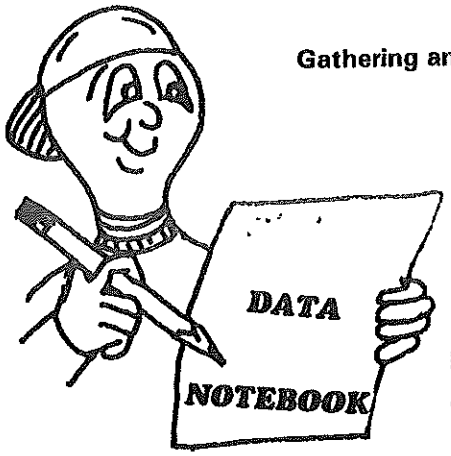

NAME _____

The Collection of Data

DIRECTIONS: Use the data given below and complete the charts. The first one has been done for you.

INFO: The scores for a student's semester science grades are: 55, 75, 85, 65, 70, 95, 55, 83, 85, 100, 97, 85.

1. Complete the frequency portion of the chart to the right.
2. What is the highest score? _____
3. What is the lowest score? _____
4. What is the frequency of the score that occurred most often? _____
5. How many scores are 70 or higher? _____
6. If 70 is the lowest passing score, how many scores are not passing? _____
7. What is this student's average for the semester? _____

Score	Tally	Frequency
95-100	III	3
90-94		
85-89	III	
80-84	I	
75-79	I	
70-74	I	
Below 70	III	

Use the frequency table to the right to complete this section.

8. Complete the frequency portion of this table.
9. How many people responded to this survey? _____
10. What is the ratio of those students who watch 2-3 hours of television per day to those who watch 1-2 hours per day? _____
11. What percent of students watch television 3-4 hours per day? _____

Hours per day viewing television in the summer	Tally	Frequency
0 hours	𝍸 I	
0 - ½ hours	𝍸 𝍸	
1-2 hours	𝍸 𝍸 III	
2-3 hours	𝍸 𝍸 I	
3-4 hours	𝍸 I	
5-6 hours	III	
6 or more hours	II	

EXTENSION: ***Choose an activity for which you could collect data. Organize your data by making a chart similar to those used on this page.***

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NAME_____

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Cross Products: An Easy Way to Determine Proportions

Examine these proportions:

$\frac{2}{3} = \frac{8}{12}$

$2 \times 12 = 8 \times 3$

$24 = 24$

(This is a proportion)

$\frac{3}{5} = \frac{7}{10}$

$3 \times 10 \neq 7 \times 5$

$30 \neq 35$

(This is not a proportion)

DIRECTIONS: Use cross products to see if eacn of the following equations are proportions. Put a check (v) by those equations that are proportions.

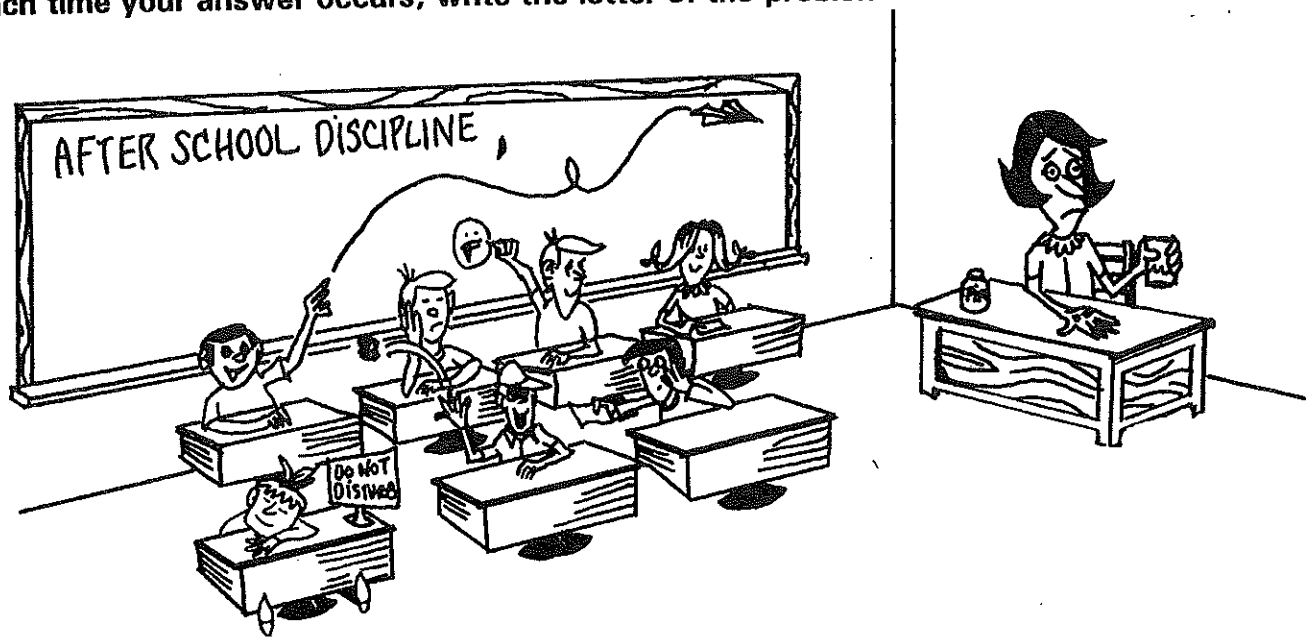
1. $\frac{3}{4} = \frac{15}{20}$
2. $\frac{3}{7} = \frac{6}{13}$
3. $\frac{8}{9} = \frac{32}{36}$
4. $\frac{35}{50} = \frac{7}{10}$
5. $\frac{3}{7} = \frac{21}{42}$
6. $\frac{8}{7} = \frac{21}{24}$
7. $\frac{6}{7} = \frac{18}{22}$
8. $\frac{3}{9} = \frac{24}{72}$
9. $\frac{11}{12} = \frac{44}{48}$
10. $\frac{25}{75} = \frac{1}{4}$
11. $\frac{12}{48} = \frac{1}{4}$
12. $\frac{7}{9} = \frac{21}{27}$
13. $\frac{14}{16} = \frac{42}{48}$
14. $\frac{6}{7} = \frac{18}{22}$

Helpful hint: You should have 8 checks!

NAME _____

Why do teachers take aspirin?

DIRECTIONS: Express each ratio as a unit rate. Then, find your answer in the decoder. Each time your answer occurs, write the letter of the problem above it.



1. $1000 for 40 Olympic tickets _____ (i)
2. 22 inches of rain in 4 hours _____ (o)
3. 216 feet in 18 seconds _____ (d)
4. $14.60 for four pounds _____ (r)
5. $1.68 per dozen _____ (f)
6. 425 jellybeans for 25 students _____ (t)
7. 90 yards in 6 seconds _____ (s)
8. 800 pounds per 20 square inches _____ (n)
9. 60 meters in 15 minutes _____ (e)
10. 360 miles on 12 gallons _____ (a)
11. $2100 in 15 weeks _____ (h)
12. 500 fish for 25 ponds _____ (c)

$0.14	5.5	$3.65	12	4	17	4	40	15	$25	5.5	40

140	4	30	12	30	20	140	4	15

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NAME _____

COMPOSITE OR PRIME?

A **prime number** is a whole number *greater than one* that has *exactly two* factors, 1 and itself.

A **composite number** is a whole number *greater than one* that has more than two factors.

DIRECTIONS: Complete the table below. If the number is a composite, you will need to give only one set of factors to prove that the number is a composite. (For example, if the number is 24, you can give 6 and 4, or 12 and 2, or 8 and 3, but you need to only give one set.)

	Number	Factors	Composite or Prime?
1.	60	5,12	Composite
2.	9		
3.	27		
4.	33		
5.	2		
6.	37		
7.	63		
8.	73		
9.	87		
10.	89		

	Number	Factors	Composite or Prime?
11.	93		
12.	97		
13.	103		
14.	141		
15.	167		
16.	121		
17.	147		
18.	149		
19.	171		
20.	207		

Helpful Hint: You should have 8 prime numbers and 12 composite numbers!

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NAME _____

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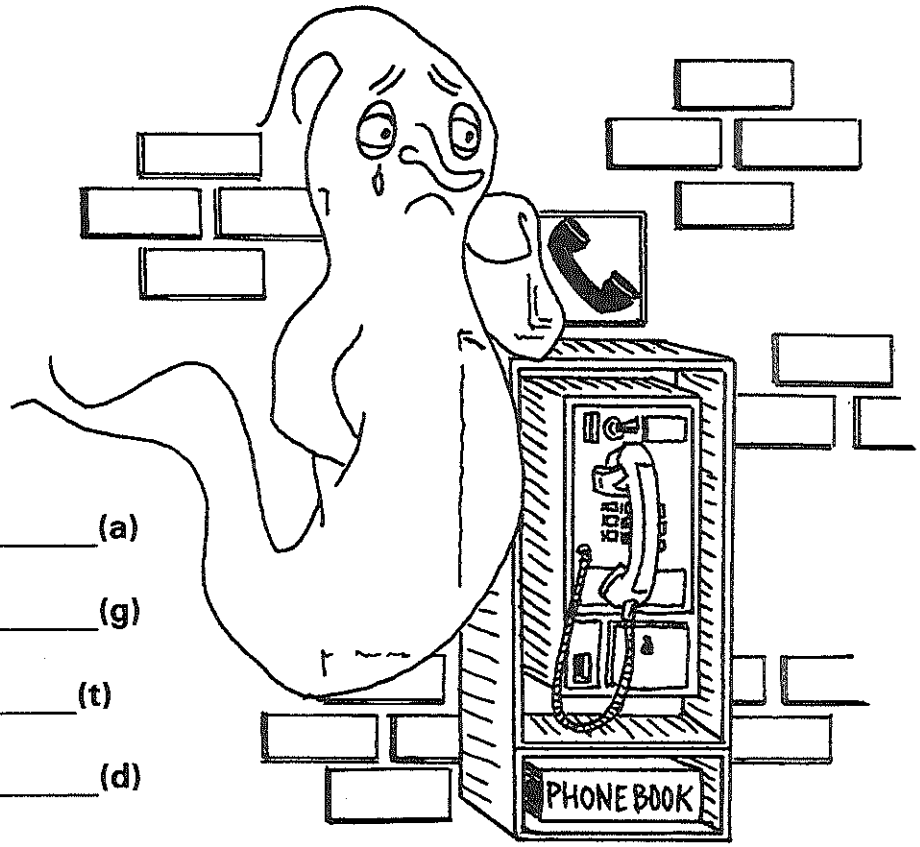
Why are ghosts lonely all the time?



DIRECTIONS: Determine the value of each number named by the whole number and its exponent. Find your answer in the decoder, and each time your answer occurs in the decoder write the letter of the problem above it.

1. 2^4 = _____ (v)
2. 3^3 = _____ (o)
3. 8^4 = _____ (h)
4. 1^5 = _____ (e)
5. 6^3 = _____ (y)
6. 7^3 = _____ (n)
7. 11^2 = _____ (a)
8. 10^4 = _____ (g)
9. 5^4 = _____ (t)
10. 12^3 = _____ (d)
11. 2^6 = _____ (b)

625	4,096	1	216	4,096	121	16	1	343	625	10,000	27	625

121	343	216	64	27	1,728	216

$P = 2l + 2w$

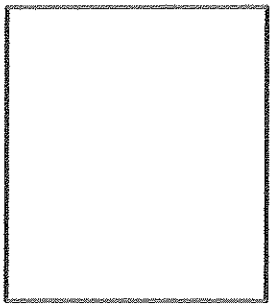
$A = l \cdot w$

Name: _____

Finding the perimeter and area.

Directions: Determine the perimeter and area of each shape.

3.1 in



2.4 in

The perimeter is:

The area is:

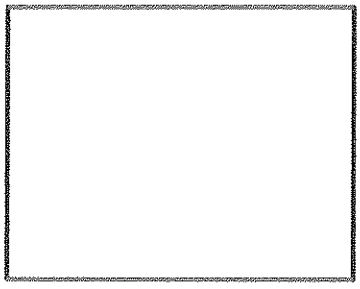
10.1 m

3.8 m

The perimeter is:

The area is:

11.7 mm

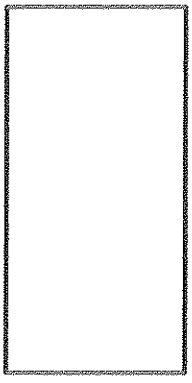


8.2 mm

The perimeter is:

The area is:

7.5 cm



14.2 cm

The perimeter is:

The area is:

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Grade 6 Math

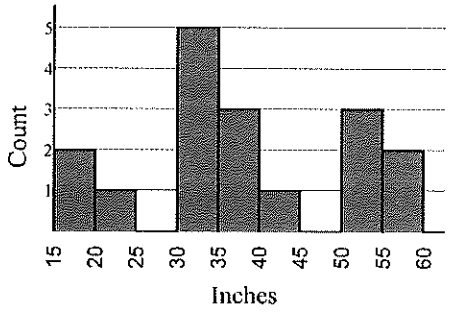
Name_____

Interpreting Histograms

Date_____ Period____

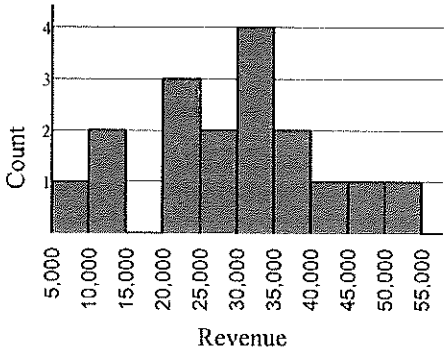
For each problem, use the histogram to answer the question.

1) Annual Precipitation



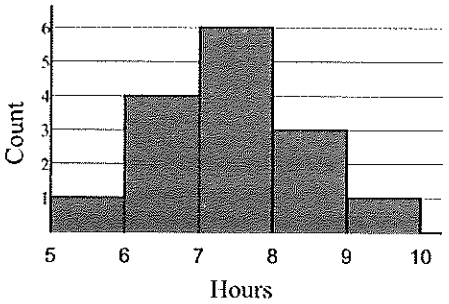
How many years had rainfall of at least 50 centimeters?

2) Monthly Revenue



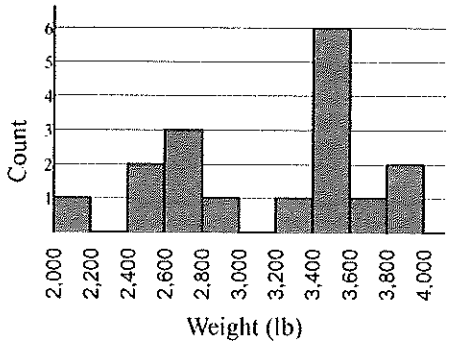
How many months had revenue of less than $45,000?

3) Hours Slept



What percent of people slept at least 8 hours?

4) Car Weights



What percent of cars weigh less than 3,000 kg?