$\qquad$

## Area - Mixed Shapes

Find the area of each shape.
1)

2)

3)

Area $=$ $\qquad$
Area $=$ $\qquad$
Area $=$
$\qquad$
4)

6)

Area $=$ $\qquad$
5)

Area $=$ $\qquad$
7) The side of a square measures 45 yards. What is the area of the square?
$\qquad$
8) Find the area of the triangle whose base is 32 inches and height is 16 inches.
$\qquad$
Converting Fractions, Decimals, and Percents
A) Convert the following.

1) $\frac{1}{2}$
2) 0.8

Decimal : $\qquad$ Percent : $\qquad$

Percent : $\qquad$ Fraction : $\qquad$
3) 1.07
4) $70 \%$

Fraction : $\qquad$ Fraction : $\qquad$

Percent : $\qquad$ Decimal: $\qquad$
B) Complete the table.

| S.no | Fractions | Decimals | Percents |
| :---: | :---: | :---: | :---: |
| 1$)$ | $\frac{2}{5}$ |  |  |
| 2$)$ |  | 0.15 |  |
| 3$)$ |  |  | $32 \%$ |

C) Which of the following fractions is equivalent to 0.09 ?
a) $\frac{9}{10}$
b) $\frac{100}{9}$
c) $\frac{9}{100}$
d) $\frac{10}{9}$

Converting Fractions, Decimals, and Percents
A) Convert the following.

1) $\frac{1}{2}$
2) 0.8


Percent: $\qquad$
3) 1.07

Fraction : $\frac{\frac{107}{100}}{\text { Percent : } 107 \%}$
4) $70 \%$
Fraction : $\qquad$ $\frac{7}{10}$

Decimal : $\qquad$
B) Complete the table.

| S.no | Fractions | Decimals | Percents |
| :---: | :---: | :---: | :---: |
| 1$)$ | $\frac{2}{5}$ | 0.4 | $40 \%$ |
| 2$)$ | $\frac{3}{20}$ | 0.15 | $15 \%$ |
| 3$)$ | $\frac{8}{25}$ | 0.32 | $32 \%$ |

C) Which of the following fractions is equivalent to 0.09 ?
a) $\frac{9}{10}$
b) $\frac{100}{9}$
c) $\frac{9}{100}$
d) $\frac{10}{9}$
$\qquad$

## Converting Fractions to Percents

A) Convert the following fractions to percents.
2) $\frac{6}{80}=$ $\qquad$
3) $\frac{7}{25}=$ $\qquad$
7) $\frac{8}{5}=$ $\qquad$
5) $\frac{1}{125}=$ $\qquad$
6) $\frac{13}{80}=$ $\qquad$
7) $\frac{5}{4}=$ $\qquad$ 8) $\frac{48}{120}=$ $\qquad$
B) Match each fraction with its equivalent percent.

1) $\frac{3}{20}$

- $2.5 \%$

2) $\frac{36}{160}$

- $15 \%$

3) $\frac{1}{40}$
$\bullet$

- $22.5 \%$
C) Which of the following is equivalent to $\frac{9}{200}$ ?
a) $405 \%$
b) $4.5 \%$
c) $45 \%$
d) $40.5 \%$


## Converting Fractions to Percents

A) Convert the following fractions to percents.

1) $\frac{1}{8}=12.5 \%$
2) $\frac{6}{80}=7.5 \%$
3) $\frac{7}{25}=2$
4) $\frac{1}{125}=0.8 \%$
5) $\frac{13}{80}=16.25 \%$
6) $\frac{8}{5}=160 \%$
7) $\frac{5}{4}=125 \%$
8) $\frac{48}{120}=-40 \%$
B) Match each fraction with its equivalent percent.
9) $\frac{3}{20} \frac{36}{160}$
C) Which of the following is equivalent to $\frac{9}{200}$ ?
a) $405 \%$
b) $4.5 \%$
c) $45 \%$
d) $40.5 \%$
$\qquad$

Solve.

5) $8^{2}+1 \times 5-45$
6) $24 \div 3+5^{3}-13^{2}$

7) $48 \div 12-4^{3}+3$
8) $9^{2}+2 \times 3 \div 6-49$

Ans =

9) $3 \times 2^{5}+15-12^{2}$
10) $8+88 \div 11-4^{3}+2$

Ans $=$


Solve each equation.

1) $10=z+6$
2) $\mathrm{q}-12=1$
3) $18=\frac{a}{2}$
4) $\frac{r}{3}=7$
5) $\mathbf{1 1}=\mathrm{m}-4$
6) $t-19=2$
7) $1+s=3$
8) $24=4 \mathrm{c}$
9) $\frac{\mathrm{v}}{5}=9$

## One-Step Equations: Integers

Solve each equation.

1) $\mathbf{1 0}=\mathrm{z}+6$

$$
z=4
$$

3) $\mathrm{q}-12=1$

$$
q=13
$$

5) $\frac{r}{3}=7$

$$
\mathbf{r}=\mathbf{2 1}
$$

7) $t-19=2$
8) $1+s=3$

$$
t=21
$$

9) $24=4 \mathrm{c}$
10) $\frac{v}{5}=9$

$$
c=6
$$

2) $8 y=48$

$$
y=6
$$

4) $18=\frac{a}{2}$

$$
a=36
$$

6) $11=m-4$

$$
m=15
$$

$$
s=2
$$

## One-Step Equations: Integers

Solve each equation.

1) $3+a=-13$
2) $y-10=-5$
3) $-6 \mathrm{~s}=35$
4) $-5=-\frac{k}{8}$
5) $m+2=-7$
6) $\frac{\mathrm{b}}{2}=-1$
7) $7=t-3$
8) $18 z=-9$
9) $-\frac{\mathrm{P}}{6}=9$
10) $-4+\mathrm{w}=-12$

## One-Step Equations: Integers

Solve each equation.

1) $3+a=-13$

$$
a=-16
$$

3) $-6 \mathrm{~s}=35$

$$
s=-\frac{35}{6} \text { or }-5 \frac{5}{6}
$$

5) $m+2=-7$

$$
m=-9
$$

7) $7=t-3$
8) $18 z=-9$

$$
t=10
$$

9) $-\frac{\mathrm{P}}{6}=9$

$$
p=-54
$$

$$
w=-\mathbf{8}
$$

Find the Prime Factors of the Numbers
1)

2 )

3 )


Prime Factors
Prime Factors
Prime Factors
${ }_{-} x_{-} x_{-}=99$
${ }_{-} X_{-} X_{-} X_{-} X_{-}=80$
${ }_{-} x_{-} X_{-} x_{-}=24$

4 )


5 )


6 )


Prime Factors
$x_{-} x_{-} x_{-}=88$
Prime Factors
Prime Factors
${ }_{-} x_{-} x_{-} x_{-}=100 \quad x_{-} x_{-} x_{-} x_{-}=48$

## Dividing Fractions

1) $\frac{2}{4} \div \frac{2}{3}=$
2) $\frac{2}{10} \div \frac{2}{3}=$
3) $\frac{1}{4} \div \frac{1}{3}=$
4) $\frac{1}{2} \div \frac{8}{10}=$
5) $\frac{6}{10} \div \frac{4}{5}=$
6) $\frac{1}{3} \div \frac{2}{4}=$
7) $\frac{4}{5} \div \frac{1}{2}=$
8) $\frac{3}{10} \div \frac{1}{2}=$
9) $\frac{1}{2} \div \frac{1}{3}=$
10) $\frac{7}{10} \div \frac{3}{5}=$

Name :
Score :
Date:

Dividing Fractions and Whole Numbers

1) $6 \div \frac{2}{4}=$
2) $\frac{1}{3} \div 8=$
3) $\frac{1}{2} \div 6=$
4) $\frac{3}{4} \div 3=$
5) $7 \div \frac{1}{2}=$
6) $\frac{2}{3} \div 9=$
7) $3 \div \frac{2}{3}=$
8) $10 \div \frac{1}{2}=$
9) $\frac{2}{4} \div 2=$
10) $\frac{2}{3} \div 8=$
11) $\frac{1}{10} \div 6=$
12) $7 \div \frac{3}{4}=$
13) $\frac{2}{3} \div 10=$
14) $7 \div \frac{3}{4}=$
15) $\frac{2}{5} \div 4=$

Name :
Score :
Teacher :
Date :

## Complete the function table for each equation.

1) 

$y=x+9$

| $x$ | $y$ |
| :---: | :---: |
| 0 |  |
| 3 |  |
| 5 |  |
| 2 |  |
| 8 |  |

2) 

$y=x-5$

| $x$ | $y$ |
| :---: | :---: |
| 5 |  |
| 8 |  |
| 7 |  |
| 6 |  |
| 1 |  |

3) 

$y=8 x$

| $x$ | $y$ |
| :---: | :---: |
| 9 |  |
| 3 |  |
| 8 |  |
| 2 |  |
| 1 |  |

4) $y=-8 x$

| $x$ | $y$ |
| :---: | :---: |
| 1 |  |
| 3 |  |
| 5 |  |
| 7 |  |
| 9 |  |

5) $y=9 x$

| $x$ | $y$ |
| :---: | :---: |
| 8 |  |
| 9 |  |
| 3 |  |
| 4 |  |
| 0 |  |

6) $y=-2 x$

| $x$ | $y$ |
| :---: | :---: |
| 6 |  |
| 3 |  |
| 4 |  |
| 9 |  |
| 7 |  |

7) 

$y=x-7$

| $x$ | $y$ |
| :---: | :---: |
| 9 |  |
| 7 |  |
| 3 |  |
| 6 |  |
| 0 |  |

8) 

$y=x+6$

| $x$ | $y$ |
| :---: | :---: |
| 5 |  |
| 9 |  |
| 4 |  |
| 7 |  |
| 2 |  |

9) $y=x+3$

| $x$ | $y$ |
| :---: | :---: |
| 7 |  |
| 3 |  |
| 0 |  |
| 9 |  |
| 5 |  |

10) $y=7 x$

| $x$ | $y$ |
| :---: | :---: |
| 8 |  |
| 6 |  |
| 2 |  |
| 9 |  |
| 3 |  |

11) 

$y=-3 x$

| $x$ | $y$ |
| :---: | :---: |
| 8 |  |
| 3 |  |
| 7 |  |
| 5 |  |
| 6 |  |

12) $y=x-9$

| $x$ | $y$ |
| :---: | :---: |
| 3 |  |
| 5 |  |
| 4 |  |
| 6 |  |
| 9 |  |

$\qquad$
$\qquad$

1) Which integer is greater than -5 ?
a) -7
b) -1
c) -9
d) -11
2) How many integers are there between -8 and 2?
a) 7
b) 4
c) 0
d) 9
3) What is the opposite value of the integer 6?
a) -6
b) 5
c) 6
d) -4
4) Identify the integer that is less than -3 .
a) 0
b) -1
c) -4
d) 2
5) Which of the following integers is greater than -1 and lesser than 7 ?
a) -9
b) 5
c) -5
d) 8
6) How many pairs of opposite integers are there between -4 and 5 ?
a) 3
b) 8
c) 2
d) 6
7) The following data shows the changes in temperatures across various cities from morning to noon. Which city recorded the maximum temperature?
a)

b)

c)

d)

$\qquad$
8) Which integer is greater than -5?
a) $\quad-7$
b) -1
c) $\quad-9$
d) -11
9) How many integers are there between -8 and 2?
a) 7
b) 4
c) 0
d) 9
10) What is the opposite value of the integer 6 ?
(a) -6
b) 5
c) 6
d) -4
11) Identify the integer that is less than -3.
a) 0
b) -1
c) -4
d) 2
12) Which of the following integers is greater than -1 and lesser than 7 ?
a) $\quad-9$
b) 5
c) -5
d) 8
13) How many pairs of opposite integers are there between -4 and 5?
a) 3
b) 8
c) 2
d) 6
14) The following data shows the changes in temperatures across various cities from morning to noon. Which city recorded the maximum temperature?
a)

b)

c)


$\qquad$

## Integers

Simplify.

1) $(-92)-37=$ $\qquad$
2) $79+(-52)=$ $\qquad$ 4) $(-8) \times(-11)=$
3) $28 \div(-2)=$
4) $(-31)+50=$ $\qquad$
5) $(-16) \div(-4)=$ $\qquad$
6) $(-3) \times 17=$ $\qquad$
7) $40 \div 5=$ $\qquad$ 12) $19 \times(-9)=$ $\qquad$
8) $(-25)+(-77)=$ $\qquad$ 14) $76-34=$ $\qquad$
9) $12-(-63)=$ $\qquad$ 16) $(-21) \div 3=$ $\qquad$
$\qquad$

## Answer key

Simplify.

1) $(-92)-37=-129$
2) $79+(-52)=$ $\qquad$ 4) $(-8) \times(-11)=$

88
5) $4 \times 14=$ 56
7) $(-16) \div(-4)=\xrightarrow{4}$
9) $(-3) \times 17=$ $\qquad$ 10) $(-57)-(-29)=$ $\qquad$
11) $40 \div 5=$ $\qquad$ 12) $19 \times(-9)=$ $\qquad$
13) $(-25)+(-77)=-102$
14) $76-34=$ $\qquad$
15) $12-(-63)=$ $\qquad$ 75
16) $(-21) \div 3=$ $\qquad$
$\qquad$

## Mean, Median, Mode \& Range

Find the mean, median, mode and range for each set of numbers.

1) $24,31,1$
Mean : $\qquad$ Median : $\qquad$
Mode : $\qquad$ Range : $\qquad$
2) $53,13,34,41,26,61,34,13,69$

Mean : $\qquad$ Median : $\qquad$
Mode : $\qquad$ Range : $\qquad$
5) $92,63,22,80,63,71,44,35$

Mean : $\qquad$ Median : $\qquad$
Mode : $\qquad$ Range : $\qquad$
7) $72,43,15,66,32,72,52,19,28,81$

Mean : $\qquad$ Median : $\qquad$
Mode : $\qquad$ Range : $\qquad$
9) $12,46,32,18,26,41,46$

Mean : $\qquad$ Median : $\qquad$
Range : $\qquad$
2) $5,28,16,32,5,16,48,29,5,35$

Mean : $\qquad$ Median : $\qquad$
Mode : $\qquad$ Range : $\qquad$
4) $85,58,72,85,46,93$

Mean : $\qquad$ Median : $\qquad$
Mode : $\qquad$ Range : $\qquad$
6) $39,82,74,96,64,52,74$

Mean : $\qquad$ Median : $\qquad$ Mode : $\qquad$ Range : $\qquad$
8) $40,90,36,68,90,11,88,54$

Mean : $\qquad$ Median : $\qquad$
Mode : $\qquad$ Range : $\qquad$
10) $63,40,51,70,36,21,51,28,19$

Mean : $\qquad$ Median : $\qquad$
Mode : $\qquad$ Range : $\qquad$
$\qquad$
$\qquad$

## Opposite Integers

A) Write the opposite value of each integer.

1) Opposite of 12
2) Opposite of -25 $\qquad$
3) Opposite of -99 $\qquad$ 4) Opposite of 4 $\qquad$
4) Opposite of 36 $\qquad$ 6) Opposite of -57 $\qquad$
B) Mark each integer given below and its opposite value on the number line.
5) 2

6) -5

7) 1

C) Evaluate each expression.
8) Opposite of $-(-24)$ $\qquad$ 2) Opposite of $+(-8)$ $\qquad$
9) Opposite of $+(+15)$ $\qquad$ 4) Opposite of -(+33) $\qquad$
10) Opposite of $+(-40)$ $\qquad$ 6) Opposite of -(-6) $\qquad$
$\qquad$

## Pie Graph - Icecream Sales

John, an ice cream seller sells ice cream during weekdays. The pie graph display the number of ice cream sold. Study the pie graph and answer the questions.


1. What is the percentage of ice cream sold on Thursday?
2. What are the two days that equal the sales on Wednesday?
3. When did John sell most of the ice cream in his stand? $\qquad$
4. On which day 300 ice creams were sold? $\qquad$
5. What is the difference in percentage of ice cream sold $\qquad$ between Wednesday and Friday?
$\qquad$

## Plotting Points

A) Plot each point on the coordinate grid.

1) $P(-4,1)$
2) $E(5,2)$
3) $R(-2,-5)$
4) $\mathrm{I}(1,-3)$
5) $M(-4,4)$
6) $D(0,-1)$
7) $\mathrm{H}(-2,5)$
8) $G(-4,-3)$
9) $\mathrm{L}(3,-3)$
10) $X(2,2)$

B) Draw each shape on the coordinate grid.

11) Draw $\bigcirc$ at $(3,-4)$
12) Draw $\hat{\substack{r}}$ at $(-5,5)$
13) Draw $\square$ at (3, 0)
14) Draw $\triangle$ at $(-1,-4)$
15) Drawat (4,4)

## Working with the Properties of Mathematics

1) Which equation shows the Addition Property of Zero ?
A. $a+0=a$
B. $(a+b)+7=a+(7+b)$
C. $\mathrm{a} \times 0=0$
D. $a(b+c)=a b+a c$
2) Which property is used in the following expression? ( $\mathrm{a} \times \mathrm{b}$ ) $\times \mathrm{c}=\mathrm{a} \times(\mathrm{b} \times \mathrm{c})$
A. Associative Property of Addition
B. Distributive Property
C. Commutative Property of Addition
D. Associative Property of Multiplication

3 ) Which of the following does not show the Commutative Property ?
A. $x+y=y+x$
B. $y x=x y$
C. $7+y=y+7$
D. $x y-2=x y$

4 ) Which property is used in the following expression? $\quad 3(8+5)=24+15$
A. Associative Property of Multiplication
B. Associative Property of Addition
C. Commutative Property of Addition
D. Distributive Property

5 ) Simplify this expression : $4(y+z)$
A. 4 yz
B. $4 y+4 z$
C. $4 z+y$
D. $4 y+z$

6 ) Which Property of Multiplication is shown? $(6+5) \times 2=6 \times 2+5 \times 2$
A. Commutative Property
B. Identity Property
C. Distributive Property
D. Associative Property

7 ) Which is an example of Associative Property of Addition?
A. $8+7=7+8$
B. $(7+5)+9=7+(5+9)$
C. $4+0=4$
D. $2+(-2)=0$

8 ) Which of the following is an example of Commutative Property of Addition?
A. $(6+4)+3=6+(4+3)$
B. $9+6=6+9$
C. $7 \times 1=7$
D. $2+5=8+2$

9 ) Which property is used in the following?
$5 \times(3+4)=5 \times 3+5 \times 4$
A. Commutative Property
B. Associative Property
C. Distributive Property
D. None of the above

10 ) Which operation will not change the value of any nonzero number?
A. Multiplying by Zero
B. Adding Zero
C. Adding One
D. Dividing by Zero

## Working with the Properties of Mathematics

11 ) Which property is used in the following expression? $(2 \times 4) \times 7=4 \times(7 \times 2)$
A. Associative Property of Multiplication
B. Associative Property of Addition
C. Commutative Property of Addition
D. Distributive Property of Multiplication

12 ) Which property of addition is used in the following ? $(2+9)+8=2+(9+8)$
A. Associative Property
B. Distributive Property
C. Identity Property
D. Commutative Property

13 ) Which property would you use to simplify the following expression ? $5(y+6)$
A. Distributive Property
B. Associative Property
C. Commutative Property
D. Multiplication Property of Zero

14 ) Which of the following does not show the Commutative Property of Addition?
A. $9+x=x+9$
B. $\mathrm{ab}=\mathrm{ba}$
C. $a+b=b+a$
D. $3 x+4 y=4 y+3 x$

15 ) Which equation shows the Zero Property of Multiplication?
A. $6 \times 0=0$
B. $4 \times 1=4$
C. $7 \times 3=3 \times 7$
D. $8+8+8=3 \times 8$

16 ) Which equation shows the Commutative Property of Multiplication?
A. $7 \times 1=7$
B. $6 \times 4-9 \times 4=(6-9) \times 2$
C. $3 \times 8=8 \times 3$
D. $2 \times 3=2+2+2$

17 ) The value of any nonzero number will be changed by $\qquad$ .
A. multiplying by zero
B. dividing by one
C. adding zero
D. multiplying by one
$\qquad$

## Double Line Graph - Factory Employees

A production company has both male and female staff working in the assembly unit. The graph shows the number of male and female employees in the company from 2003 to 2008. Read the graph and answer the questions.


1) Which year had the most number of female employees?
2) How many employees worked in the year 2003?
3) Which year had 225 male and female employees altogether?
4) What is the difference on the number of male and female employees during the year 2004?
5) Were the number of male employees more compared to the female employees in the year 2005? Yes or No.
$\qquad$
Standard and Scientific Notations
A) Express each number in scientific notation.
6) $3,001,500,000,000$
$=$
7) $1,020,000$
$=$
8) $75,820,000$
$=$ $\qquad$
9) $256,000,000,000$
$=$ $\qquad$
10) $541,000,000$
$=$ $\qquad$
B) Express each number in standard notation.
11) $1 \times 10^{13}$
$=$
12) $7.0128 \times 10^{15}$
$=$ $\qquad$
13) $9.25 \times 10^{9}$
$=$ $\qquad$
14) $1.562 \times 10^{6}$
$=$ $\qquad$
15) $4.2 \times 10^{11}$
$=$

Name:

Standard and Scientific Notations
A) Express each number in scientific notation.

1) $3,001,500,000,000$
$=3.0015 \times 10^{12}$
2) $1,020,000$
$=\quad 1.02 \times 10^{6}$
3) $75,820,000$
$=\quad 7.582 \times 10^{7}$
4) $256,000,000,000$
$=\quad 2.56 \times 10^{11}$
5) $541,000,000$
$=\quad 5.41 \times 10^{8}$
B) Express each number in standard notation.
6) $1 \times 10^{13}$
7) $7.0128 \times 10^{15}$
8) $9.25 \times 10^{9}$
9) $1.562 \times 10^{6}$
10) $4.2 \times 10^{11}$
$=4$ 420,000,000,000

Name
Simplify each radical.

$$
\begin{aligned}
& \sqrt{100}= \\
& \sqrt{81}= \\
& \sqrt{36}= \\
& \sqrt{121}= \\
& \sqrt[3]{125}= \\
& \sqrt[3]{1000}= \\
& \sqrt{144}= \\
& \sqrt[3]{64}= \\
& \sqrt[3]{8}= \\
& \sqrt{64}=
\end{aligned}
$$

$\qquad$
Squaring Numbers
A) Find the values of the following.

1) $7^{2}$
2) $13^{2}$
3) $4^{2}$
4) $25^{2}$
5) $42^{2}$
6) $10^{2}$
B) Find the squares of the following numerals.
7) 5
8) 49
9) 17
10) 21
11) 3
12) 34
C) 1) Which of the following is the square of 20 ?
i) 40
ii) 200
iii) 400
iv) 220
13) Which of the following is equal to $44^{2}$ ?
i) 1,936
ii) 1,863
iii) 1,369
iv) 1,963
$\qquad$

## Squaring Numbers

A) Find the values of the following.

1) $7^{2}$
2) $13^{2}$
3) $4^{2}$

49
$\qquad$
4) $25^{2}$
5) $42^{2}$

169
$\qquad$
6) $10^{2}$
$\qquad$ 100
B) Find the squares of the following numerals.

1) 5
2) 49
3) 17

4) 21
5) 3
6) 34

289

## 441

## 9

1,156
C) 1) Which of the following is the square of 20 ?
i) 40
ii) 200
(iii) 400
iv) 220
2) Which of the following is equal to $44^{2}$ ?
-) 1,936
ii) 1,863
iii) 1,369
iv) 1,963
$\qquad$
Fill in the measures of the unknown angles.


