Name: _____Class: _____

8TH Grade Summer Math Assignment

After completing each section of the assignment, rate yourself on your understanding by circling the appropriate amount of stars.

KEY	
★★★★★	"I excel at this and can teach others."
★★★★	"I can totally do this by myself."
★★★	"I understand how to do it but have some questions still."
★★	"I don't know if my answers are right or not."
★	"I am just not sure."
-	"What. Is. This."

<u>Circle the amount of stars best for you.</u>

A. Adding and Subtracting Integers ★★★★★

B. Multiplying and Dividing Integers ★★★★★

C. Simplifying Expressions ★★★★★

D. Solving Two Step Equations ★★★★★

E. Area of Rectangles ★★★★★

F. Identifying Coordinates ★★★★★

G. Plotting Points ★★★★★

H. Input/ Output Table ★★★★★

I. Proportions ★★★★★

J. Fraction Equations ★★★★★

K. Decimal Equations ★★★★★

Adding and Subtracting Integers

Simplify.

1) $1 + 15 =$ _____

2) $(-6) - (-17) =$ _____

3) $19 - (-2) =$ _____

4) $(-13) + 20 =$ _____

5) $(-4) + (-18) =$ _____

6) $5 - 14 =$ _____

7) $(-12) - 7 =$ _____

8) $10 + (-16) =$ _____

9) $3 + (-20) =$ _____

10) $(-8) - 12 =$ _____

11) $(-15) - (-10) =$ _____

12) $(-19) + 18 =$ _____

13) $17 + 13 =$ _____

14) $11 - (-9) =$ _____

15) $16 - 0 =$ _____

16) $(-7) + (-14) =$ _____

Multiplying and Dividing Integers

Simplify.

1) $6 \times (-4) =$ _____

2) $(-105) \div 7 =$ _____

3) $117 \div 13 =$ _____

4) $(-2) \times (-10) =$ _____

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

6) $108 \div (-9) =$ _____

7) $(-154) \div (-14) =$ _____

8) $13 \times 12 =$ _____

9) $8 \times 3 =$ _____

10) $(-48) \div (-6) =$ _____

11) $(-40) \div 10 =$ _____

12) $4 \times (-15) =$ _____

13) $(-12) \times (-7) =$ _____

14) $35 \div 5 =$ _____

15) $90 \div (-15) =$ _____

16) $(-1) \times 1 =$ _____

Simplifying Expressions

Simplify each expression by combining like terms.

1) $5x-6y^5-14y^5-13x$

2) $8-9+0+3y^3-9$

3) $-8+6-11x-13x+13$

4) $9x^2+15x^2+6x+15y^9-2x^2+13x$

5) $-1-14x^2+13x^2+1+9x^2$

6) $5y^3-4+0x^5-8+12y^3+1$

7) $4y+6y-7y+8y-1z-2z$

8) $5y-13+1y$

9) $-14y^7-6y^2-15+8y^2-12y^7-4$

10) $-10y^6-12y^6-12y^6-3y^3$

11) $-3x+14x^2+6x-1+9x$

12) $9x+15z-6x-11x-3x$

Solving two step equations

Find the value of x.

1) $29 + 5x = 44$

2) $21 + 3x = 51$

3) $13 + 5x = 33$

4) $47 - 3x = 32$

5) $157 + -11x = 69$

6) $1x + 72 = 82$

7) $74 - 13x = 35$

8) $73 + -3x = 55$

9) $34 + 5x = 64$

10) $109 + -4x = 73$

11) $75 + 2x = 81$

12) $64 - 5x = 14$

Solve each equation.

1) $5n + 5 = 45$

2) $\frac{y}{6} - 3 = -11$

3) $4(g - 1) = 24$

4) $\frac{v + 9}{15} = 0$

5) $-40 = 12x + 8$

6) $-2p - 3 = -19$

7) $13 = \frac{w - 14}{2}$

8) $36 = 1 + 7a$

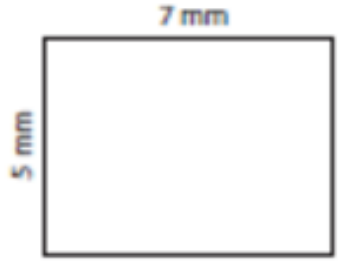
9) $-9 = -11 + \frac{b}{8}$

10) $2q + 10 = 7q$

Area of a rectangle

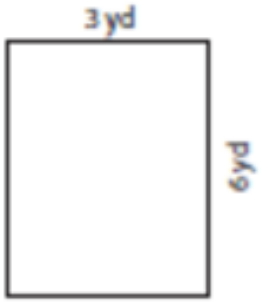
Find the area of each rectangle.

1)



Area =

2)

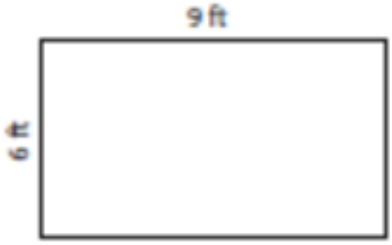


Area =

3)

Area =

4)

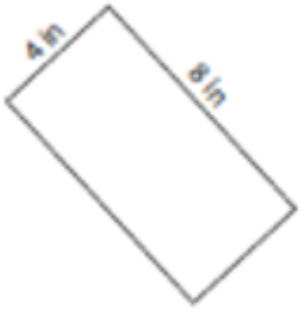


Area =

5)

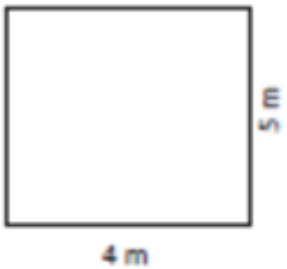
Area =

6)



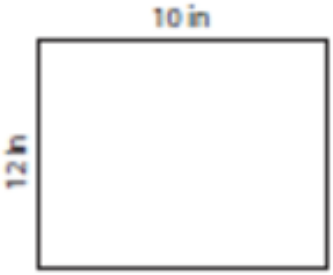
Area =

7)



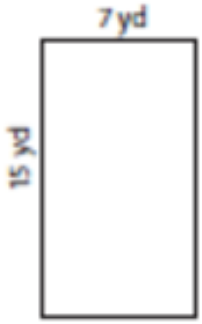
Area =

8)



Area =

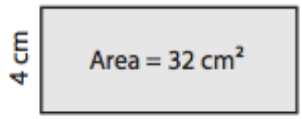
9)



Area =

Using the Area to Find the Missing Length

Example :



Area = Length x Width

$32\ cm^2$ = Length x 4 cm

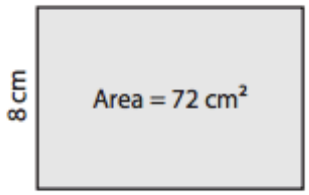
$\frac{32}{4}$ = Length

Length = **8 cm**

Ans = 8 cm

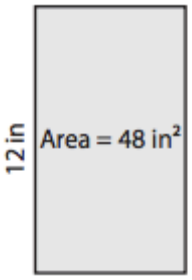
Find the length/width of each rectangle.

1)



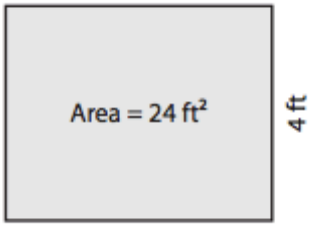
Length = _____

2)



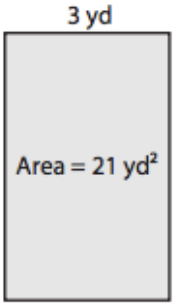
Width = _____

3)



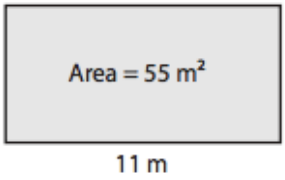
Length = _____

4)



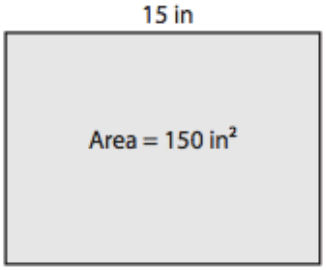
Length = _____

5)



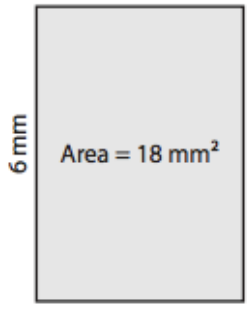
Width = _____

6)



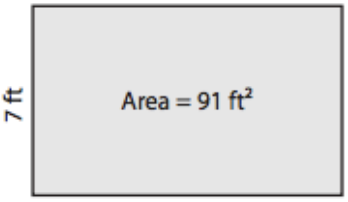
Width = _____

7)



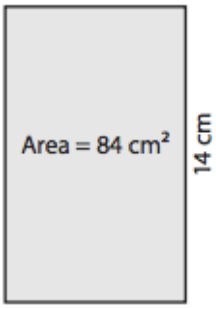
Width = _____

8)



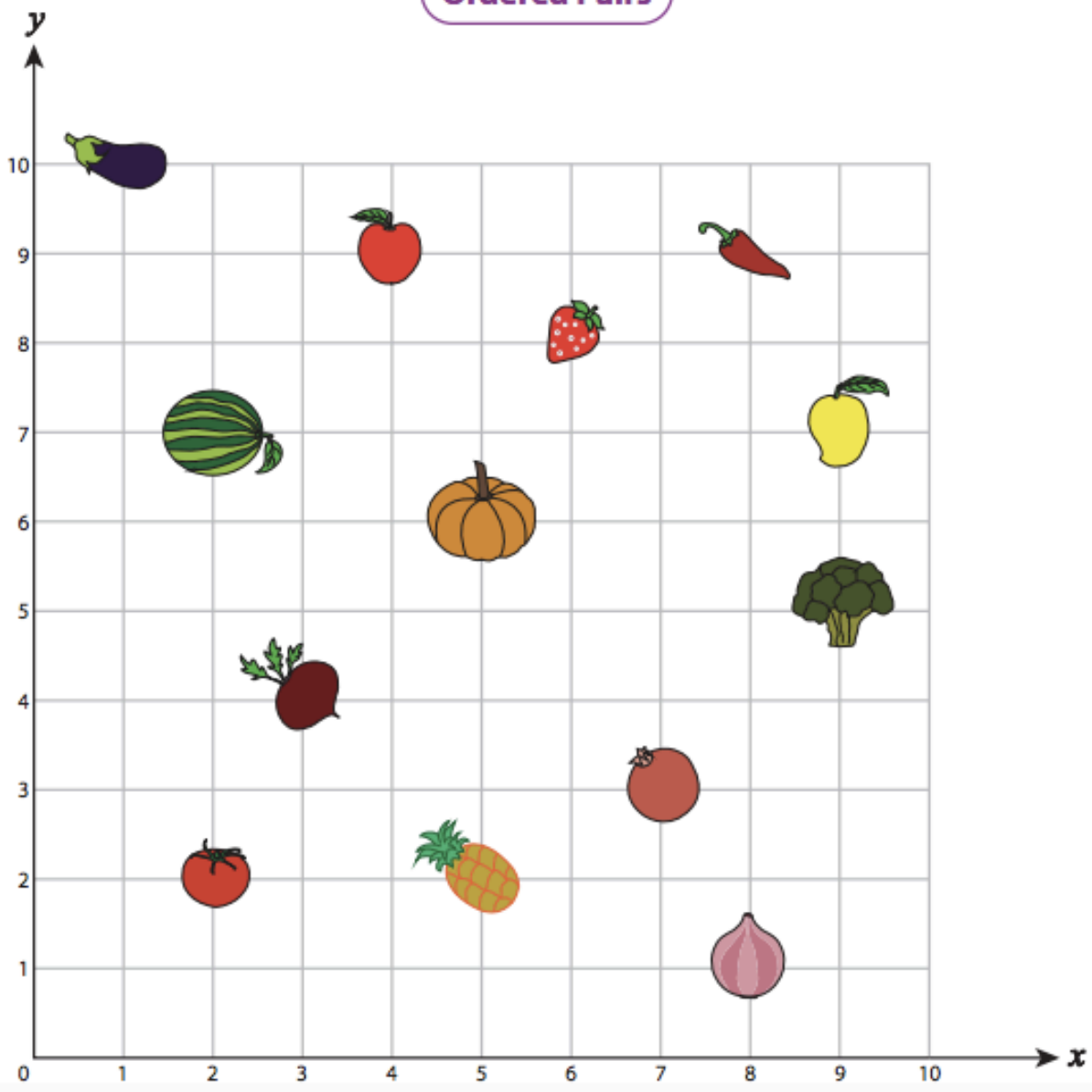
Length = _____

9)



Width = _____

Identifying Coordinates



A) Write the ordered pair for each item.

1)  _____

2)  _____

3)  _____

4)  _____

5)  _____

B) Write the item located at each ordered pair.

6) (2, 2) _____

7) (9, 7) _____

8) (2, 7) _____

9) (3, 4) _____

10) (7, 3) _____

Plotting Points

A) Plot each point on the coordinate grid.

1) T(3, 3)

2) S(1, 8)

3) H(2, 8)

4) E(6, 2)

5) R(5, 4)

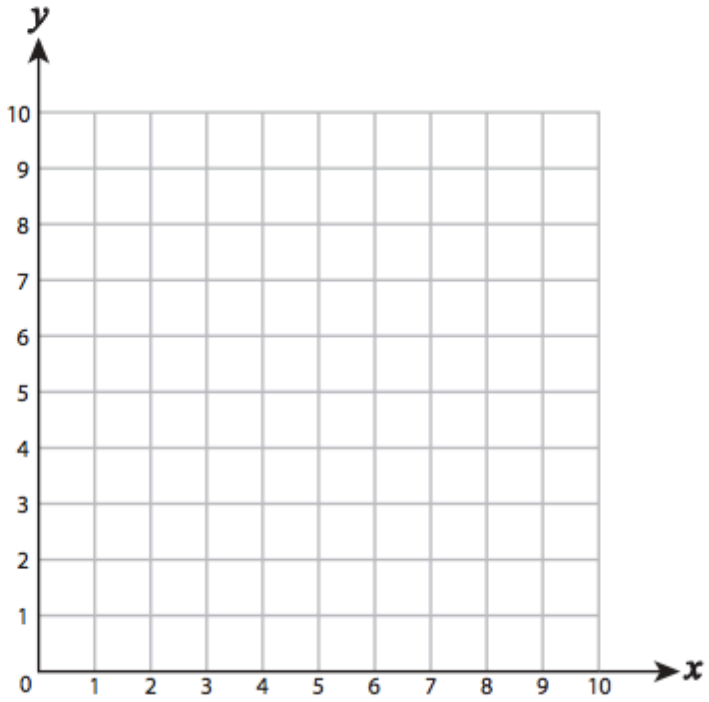
6) L(7, 6)

7) M(3, 1)

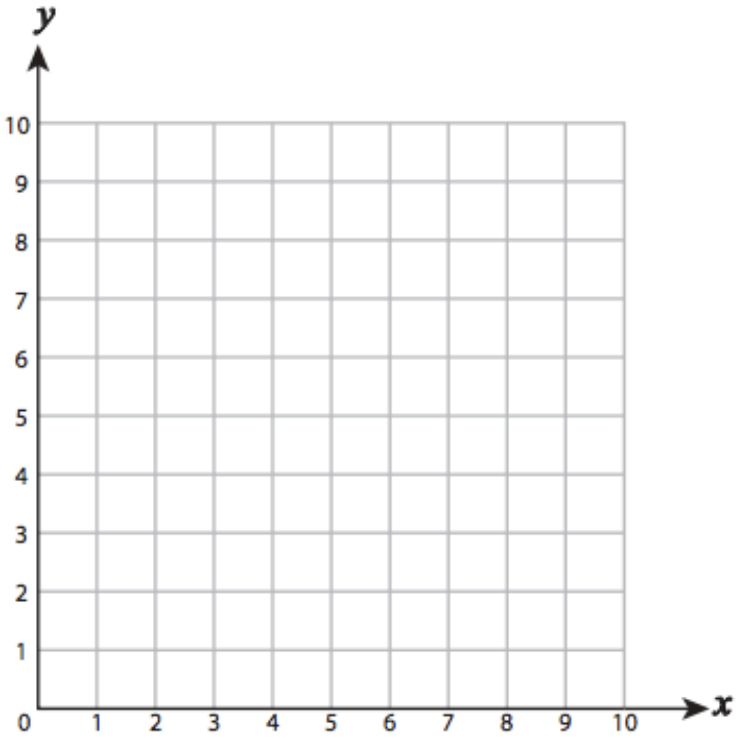
8) V(9, 5)

9) P(7, 1)

10) A(4, 7)



B) Draw each shape on the coordinate grid.



11) Draw ○ at (3, 1)

12) Draw ☆ at (4, 5)

13) Draw ▭ at (1, 7)

14) Draw △ at (3, 5)

15) Draw □ at (8, 2)

Input/ Output Table

1) $y = x - 3$

x	y
-9	
8	
-7	
0	
6	

2) $y = 6x$

x	y
6	
5	
0	
3	
4	

3) $y = -\frac{1}{3}x + 2$

x	y
-3	
-2	
0	
2	
-8	

4) $y = x + 4$

x	y
3	
7	
-7	
-6	
-3	

5) $y = \frac{1}{7}x - 4$

x	y
-1	
0	
6	
3	
7	

6) $y = -6x$

x	y
-7	
-3	
-9	
-5	
8	

7) $y = -4x + 7$

x	y
4	
-3	
2	
-4	
1	

8) $y = x - 7$

x	y
-3	
5	
-8	
3	
-1	

9) $y = 8x - 9$

x	y
1	
4	
-7	
6	
0	

10) $y = 3x - 6$

x	y
2	
-9	
-7	
-8	
9	

11) $y = \frac{1}{4}x - 5$

x	y
-6	
0	
-5	
6	
3	

12) $y = 9x$

x	y
3	
-4	
0	
-3	
-9	

Proportions (cross- multiply)

Solve each proportion.

1) $\frac{10}{8} = \frac{n}{10}$

2) $\frac{7}{5} = \frac{x}{3}$

3) $\frac{9}{6} = \frac{x}{10}$

4) $\frac{7}{n} = \frac{8}{7}$

5) $\frac{4}{3} = \frac{8}{x}$

6) $\frac{7}{b+5} = \frac{10}{5}$

7) $\frac{6}{b-1} = \frac{9}{7}$

8) $\frac{4}{m-8} = \frac{8}{2}$

9) $\frac{5}{6} = \frac{7n+9}{9}$

10) $\frac{4}{9} = \frac{r-3}{6}$

Fraction Equations

1). Solve: $c - \frac{1}{5} = \frac{3}{5}$

2). Solve: $r + \frac{1}{4} = \frac{3}{4}$

3). You go on a trip to the Zoo. **Each animal** eats 1/5 cup of food. If you have a 7/8 cup of food , how many animals can you feed?

Claim: _____

4). Solve

$$\frac{2}{3}d = \frac{1}{2}$$

5). Solve:

$$\frac{f}{3} = \frac{1}{8}$$

6). Solve:

$$s - \frac{3}{7} = \frac{1}{7}$$

7). Solve:

$$v + \frac{2}{9} = \frac{7}{9}$$

8). Sue is calculating how much she ran on Monday and Tuesday. She ran 9/10 of a mile on Monday and ran 16/10 miles in total for the two day. How many miles did she run on Tuesday?

Equation:

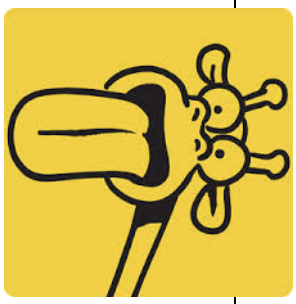
Solve:

Decimal Equations

1). Solve: x + 1.4 = 3.6

2). Solve: y – 3.7 = 5.2

3) You go on a trip to the Zoo. **Each cup of food** to feed the animals **is $1.75**. If you have $12.50, how many cups of food can you buy?



Variable: **each cup = c**

Complete the Equation: ___**c + = 12.50**

Solve:

4). Solve: 2.5s = 10

5) Solve: $\frac{d}{4} = 6.2$

6) Solve:

$p + 8 = 14.1$

7) Solve:

$28.8 = 18x$

8). Adrian wants to buy some CDs, **each costing $11.25.** He has $68.65 to spend. Find how many CDs she can buy.

Variable: **each CD = c**

Write Equation:

Solve: