

**NAME:** \_\_\_\_\_

**Summer Assignment - 2024**

**7th Grade Math  
(entering 8th Grade)  
School 25  
Mrs. Hennessy**

**Instructions:**

Complete each of the pages in the attached packet.

All work will be collected during the first week of school in September 2024.

Any questions or concerns regarding this assignment can be e-mailed to me at [dhennessey@paterson.k12.nj.us](mailto:dhennessey@paterson.k12.nj.us)

Have a great summer!!



Name : \_\_\_\_\_

Multiply - Do not use a calculator. Show your work!

$$\begin{array}{r} 923 \\ \times 57 \\ \hline \end{array}$$

$$\begin{array}{r} 803 \\ \times 41 \\ \hline \end{array}$$

$$\begin{array}{r} 389 \\ \times 81 \\ \hline \end{array}$$

$$\begin{array}{r} 102 \\ \times 95 \\ \hline \end{array}$$

$$\begin{array}{r} 680 \\ \times 85 \\ \hline \end{array}$$

$$\begin{array}{r} 483 \\ \times 27 \\ \hline \end{array}$$

$$\begin{array}{r} 915 \\ \times 99 \\ \hline \end{array}$$

$$\begin{array}{r} 306 \\ \times 47 \\ \hline \end{array}$$

$$\begin{array}{r} 944 \\ \times 81 \\ \hline \end{array}$$

$$\begin{array}{r} 958 \\ \times 19 \\ \hline \end{array}$$

$$\begin{array}{r} 695 \\ \times 78 \\ \hline \end{array}$$

$$\begin{array}{r} 870 \\ \times 71 \\ \hline \end{array}$$

$$\begin{array}{r} 282 \\ \times 80 \\ \hline \end{array}$$

$$\begin{array}{r} 813 \\ \times 43 \\ \hline \end{array}$$

$$\begin{array}{r} 451 \\ \times 87 \\ \hline \end{array}$$

$$\begin{array}{r} 334 \\ \times 45 \\ \hline \end{array}$$

Long Division - Do not use a calculator. Show your work!

$$7 \overline{)6202}$$

$$7 \overline{)4449}$$

$$3 \overline{)2073}$$

$$7 \overline{)6394}$$

$$4 \overline{)2306}$$

$$7 \overline{)1414}$$

$$4 \overline{)2833}$$

$$7 \overline{)5866}$$

$$6 \overline{)1098}$$

$$7 \overline{)3623}$$

$$2 \overline{)1609}$$

$$4 \overline{)2456}$$

# Adding and Subtracting Integers

Find the sum or difference for each question.

$(+14) - (+9) =$

$(+6) + (-13) =$

$(-4) + (+1) =$

$(-6) + (+10) =$

$(+14) - (-4) =$

$(0) + (+15) =$

$(0) + (-9) =$

$(+1) + (+24) =$

$(+3) + (-14) =$

$(-24) + (+14) =$

$(+17) + (+14) =$

$(+23) + (+14) =$

$(+14) + (+9) =$

$(+21) + (+21) =$

$(-3) - (+4) =$

$(+5) - (+3) =$

$(-22) + (+20) =$

$(+18) - (+21) =$

$(+6) + (-25) =$

$(+17) + (+6) =$

$(+24) + (+11) =$

$(+21) - (+3) =$

$(+35) - (+24) =$

$(-5) + (+8) =$

$(-4) - (-9) =$

$(+25) - (+2) =$

$(-22) + (-22) =$

$(-44) - (-19) =$

$(+3) - (+10) =$

$(+22) - (+4) =$

# Multiplying and Dividing Integers

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Simplify.

1)  $8 \times (-5) =$  \_\_\_\_\_

2)  $(-120) \div 15 =$  \_\_\_\_\_

3)  $36 \div 9 =$  \_\_\_\_\_

4)  $(-7) \times (-9) =$  \_\_\_\_\_

5)  $(-13) \times 3 =$  \_\_\_\_\_

6)  $91 \div (-7) =$  \_\_\_\_\_

7)  $(-112) \div (-14) =$  \_\_\_\_\_

8)  $6 \times 15 =$  \_\_\_\_\_

9)  $1 \times (-6) =$  \_\_\_\_\_

10)  $(-72) \div (-12) =$  \_\_\_\_\_

11)  $(-80) \div 10 =$  \_\_\_\_\_

12)  $4 \times (-13) =$  \_\_\_\_\_

13)  $(-15) \times (-5) =$  \_\_\_\_\_

14)  $45 \div 3 =$  \_\_\_\_\_

15)  $117 \div (-9) =$  \_\_\_\_\_

16)  $(-12) \times 11 =$  \_\_\_\_\_

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## Order of Operations

Parenthesis

Exponents

Multiplication & Division - left to right

Addition & Subtraction - left to right

$$1) (3 \times 9 + 3^2) - 4$$

$$6) 2 \times (9 + 3) + 5^2$$

$$2) (8 - 4)^2 + (18 \div 6)$$

$$7) (45 - 5) \div 8 + 3^2$$

$$3) (64 - 4) \div 3 - 2^2$$

$$8) 4 \times (9 + 5) + 2^2$$

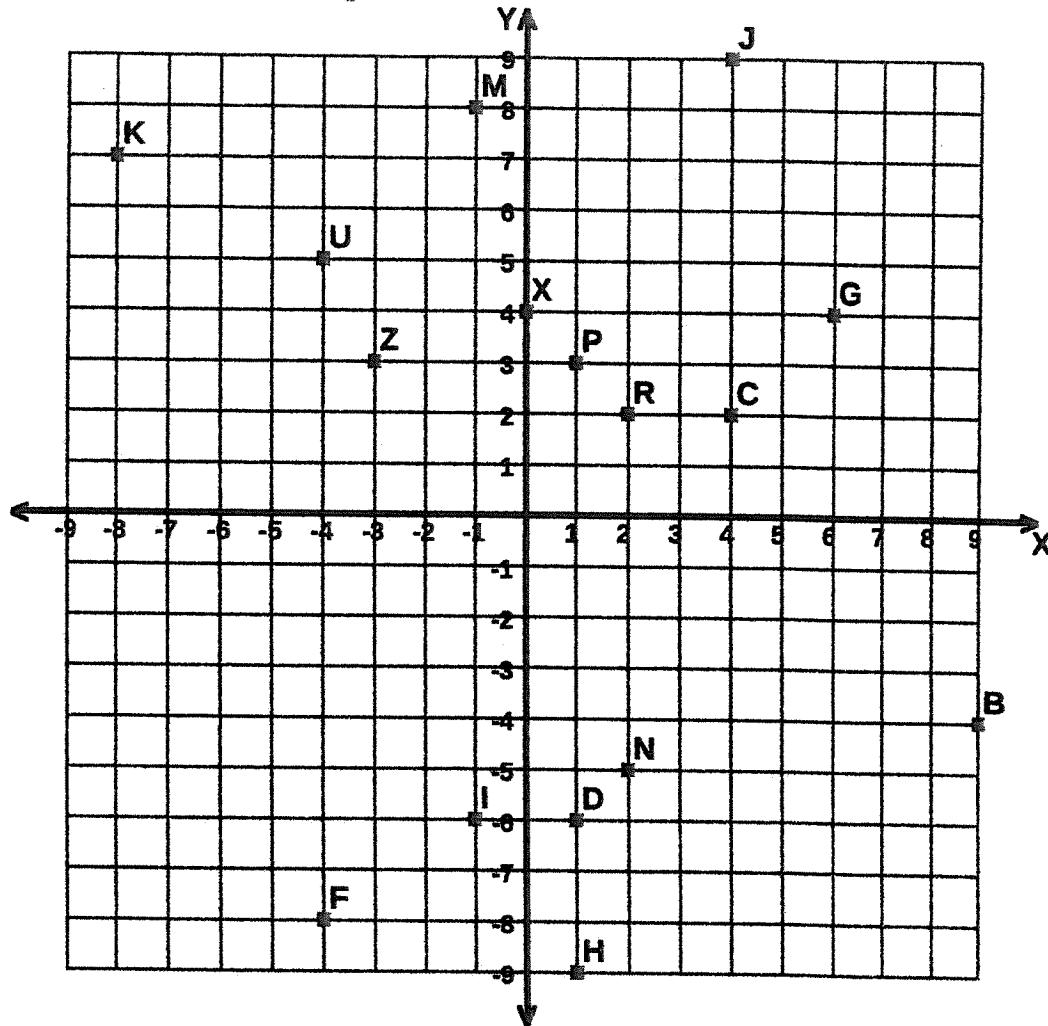
$$4) (76 - 4^2) \div (5 + 5)$$

$$9) (11 - 4)^2 + (12 \div 4)$$

$$5) (5 \times 4 + 7^2) - 6$$

$$10) (85 - 5^2) \div (0 + 2)$$

## Four Quadrant Ordered Pairs



Tell what point is located at each ordered pair.

- |                  |                  |                  |                  |
|------------------|------------------|------------------|------------------|
| 1) (+1,+3) _____ | 3) (+1,-9) _____ | 5) (-4,+5) _____ | 7) (+0,+4) _____ |
| 2) (-8,+7) _____ | 4) (+4,+9) _____ | 6) (+2,-5) _____ | 8) (-3,+3) _____ |

Write the ordered pair for each given point.

- |                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|
| 9)   F   _____  | 11)   G   _____ | 13)   B   _____ | 15)   I   _____ |
| 10)   C   _____ | 12)   R   _____ | 14)   M   _____ | 16)   D   _____ |

Plot the following points on the coordinate grid.

- |                   |                    |                   |                    |
|-------------------|--------------------|-------------------|--------------------|
| 17)   L   (+5,+5) | 19)   Y   (-7,+2)  | 21)   O   (+3,-2) | 23)   V   (+7,+0)  |
| 18)   S   (+1,+6) | 20)   E   (-9,-4 ) | 22)   A   (+1,+4) | 24)   W   (-1,+4 ) |

### Evaluate the Expressions - Single Variable

Evaluate each algebraic expression for the given value of the variable.

$$1) \quad 16 - x \text{ at } x = 5$$

$$2) \quad 3n \text{ at } n = 11$$

$$3) \quad p^3 \text{ at } p = 2$$

$$4) \quad r + 4 \text{ at } r = 13$$

$$5) \quad \frac{4}{m} + 1 \text{ at } m = 1$$

$$6) \quad c - 9 \text{ at } c = 16$$

$$7) \quad b^2 \text{ at } b = 4$$

$$8) \quad \frac{y}{5} \text{ at } y = 15$$

$$9) \quad \frac{27}{s} \text{ at } s = 9$$

$$10) \quad \frac{q}{3} + 4 \text{ at } q = 3$$

## Simplifying proper fractions

Simplify the fractions.

$$1. \frac{6}{12} = \underline{\hspace{2cm}}$$

$$2. \frac{48}{75} = \underline{\hspace{2cm}}$$

$$3. \frac{81}{270} = \underline{\hspace{2cm}}$$

$$4. \frac{16}{36} = \underline{\hspace{2cm}}$$

$$5. \frac{40}{144} = \underline{\hspace{2cm}}$$

$$6. \frac{12}{20} = \underline{\hspace{2cm}}$$

$$7. \frac{78}{90} = \underline{\hspace{2cm}}$$

$$8. \frac{12}{48} = \underline{\hspace{2cm}}$$

$$9. \frac{49}{70} = \underline{\hspace{2cm}}$$

$$10. \frac{18}{24} = \underline{\hspace{2cm}}$$

$$11. \frac{45}{144} = \underline{\hspace{2cm}}$$

$$12. \frac{20}{30} = \underline{\hspace{2cm}}$$

$$13. \frac{2}{6} = \underline{\hspace{2cm}}$$

$$14. \frac{10}{60} = \underline{\hspace{2cm}}$$

## Dividing fractions

- "Keep Change Flip"

Find the quotient.

$$1. \frac{3}{7} \div \frac{1}{3} = \underline{\hspace{2cm}}$$

$$2. \frac{1}{8} \div \frac{4}{5} = \underline{\hspace{2cm}}$$

$$3. \frac{2}{11} \div \frac{5}{10} = \underline{\hspace{2cm}}$$

$$4. \frac{2}{8} \div \frac{1}{3} = \underline{\hspace{2cm}}$$

$$5. \frac{5}{7} \div \frac{2}{7} = \underline{\hspace{2cm}}$$

$$6. \frac{1}{3} \div \frac{7}{9} = \underline{\hspace{2cm}}$$

$$7. \frac{5}{10} \div \frac{3}{5} = \underline{\hspace{2cm}}$$

$$8. \frac{7}{11} \div \frac{6}{8} = \underline{\hspace{2cm}}$$

$$9. \frac{8}{12} \div \frac{1}{3} = \underline{\hspace{2cm}}$$

$$10. \frac{7}{9} \div \frac{2}{9} = \underline{\hspace{2cm}}$$

## Simple proportions

Use cross multiplication to solve the following proportions.

$$1. \frac{4}{5} = \frac{?}{35}$$

$$2. \frac{?}{10} = \frac{6}{20}$$

$$3. \frac{4}{8} = \frac{28}{?}$$

$$4. \frac{1}{4} = \frac{5}{?}$$

$$5. \frac{?}{3} = \frac{2}{6}$$

$$6. \frac{?}{6} = \frac{28}{42}$$

$$7. \frac{1}{2} = \frac{9}{?}$$

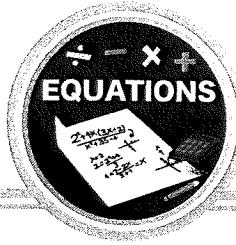
$$8. \frac{4}{5} = \frac{?}{45}$$

$$9. \frac{3}{10} = \frac{?}{50}$$

$$10. \frac{2}{3} = \frac{?}{24}$$

$$11. \frac{2}{4} = \frac{6}{?}$$

$$12. \frac{?}{6} = \frac{9}{54}$$

**Equations****One Step Equation - Integers****Addition & Subtraction****Math Worksheet 2****Solve each equation. Show your solutions.**

$b + 2 = 18$

$$\begin{aligned}b + 2 &= 18 \\b &= 18 - 2 \\b &= 16\end{aligned}$$

$12 = p - 3$

$z + 4 = 8$

$-35 = -5 - x$

$-8 = -3 + a$

$12 + t = 6$

$7 - n = 17$

$x - 2 = 9$

$-20 = 8 + b$

$-30 = y - 5$

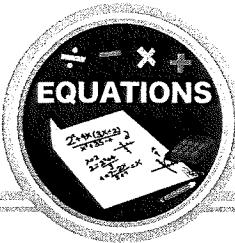
$9 + z = -15$

$-16 = -4 - p$

# Equations

## Two Step Equation - Integers

### Math Worksheet 1



**Solve each equation. Show your solutions.**

$$3x + 2 = 17$$

$$\begin{aligned}3x + 2 &= 17 \\3x &= 17 - 2 \\3x &= 15 \\x &= 15 \div 3 \\x &= 5\end{aligned}$$

$$12 = 2y - 4$$

$$4n - 7 = 1$$

$$24 = 4 + 5x$$

$$26 = 5 - 3a$$

$$7 + 2c = 19$$

$$6 + 3d = 18$$

$$6n - 4 = 26$$

$$-1 = 15 + 2b$$

$$17 = 4y - 7$$

$$24 + 4z = -4$$

$$-22 = -1 + 7d$$

## **Percentage Calculations**

**Round your answer to one decimal place.**

$$\frac{\text{is}}{\text{of}} = \frac{\%}{100}$$

1 ) What is 97 percent of 53 ?

6 ) 41 is 23 percent of what ?

2 ) 77 is 33 percent of what ?

7 ) 39 is 83 percent of what ?

3 ) What is 86 percent of 93 ?

8 ) 35 is 35 percent of what ?

4 ) What percent of 37 is 21 ?

9 ) What percent of 12 is 6 ?

5 ) What is 5 percent of 51 ?

10 ) What is 65 percent of 31 ?

**For each set of numbers, calculate the mean, median, mode and range.**

**Given the set { 8, 4, 2, 9, 5, 6, 8 } :**

**What is the mean?**

**What is the median?**

**What is the mode?**

**What is the range?**

**Given the set { 5, 3, 9, 9, 5, 8, 3 } :**

**What is the mean?**

**What is the median?**

**What is the mode?**

**What is the range?**

**Given the set { 9, 5, 7, 8, 1 } :**

**What is the mean?**

**What is the median?**

**What is the mode?**

**What is the range?**

**Given the set { 1, 8, 5, 3, 4, 8, 6 } :**

**What is the mean?**

**What is the median?**

**What is the mode?**

**What is the range?**

**Given the set { 7, 2, 1, 2, 5, 3, 8 } :**

**What is the mean?**

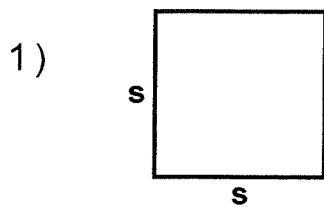
**What is the median?**

**What is the mode?**

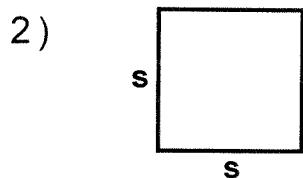
**What is the range?**

$$\text{Area} = l \times w \text{ or } s^2 / \text{Perimeter} = \text{add all sides}$$

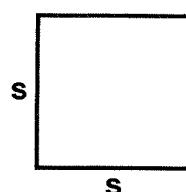
**Identify and Calculate the Area and Perimeter for each Quadrilateral.**



$$s = 6.2 \text{ mm}$$



$$s = 5.3 \text{ yds}$$

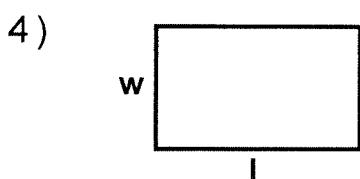


$$s = 5.7 \text{ cm}$$

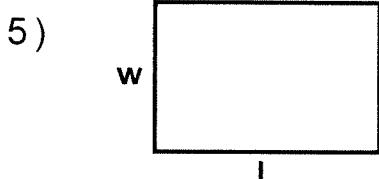
Area: \_\_\_\_\_  
Perimeter: \_\_\_\_\_  
Type: \_\_\_\_\_

Area: \_\_\_\_\_  
Perimeter: \_\_\_\_\_  
Type: \_\_\_\_\_

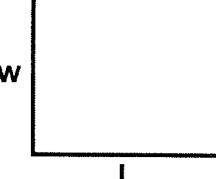
Area: \_\_\_\_\_  
Perimeter: \_\_\_\_\_  
Type: \_\_\_\_\_



$$l = 7.5 \text{ yds} \quad w = 4.6 \text{ yds}$$



$$l = 8.3 \text{ cm} \quad w = 5.6 \text{ cm}$$

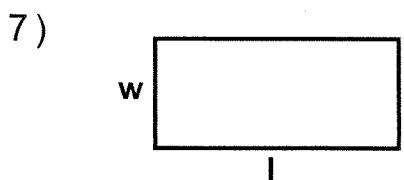


$$l = 7 \text{ mm} \quad w = 6 \text{ mm}$$

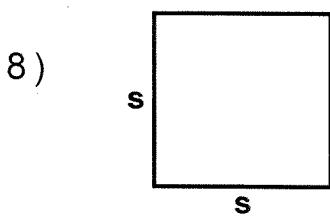
Area: \_\_\_\_\_  
Perimeter: \_\_\_\_\_  
Type: \_\_\_\_\_

Area: \_\_\_\_\_  
Perimeter: \_\_\_\_\_  
Type: \_\_\_\_\_

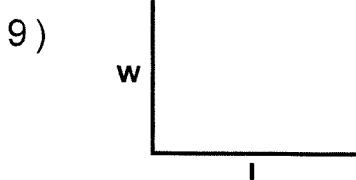
Area: \_\_\_\_\_  
Perimeter: \_\_\_\_\_  
Type: \_\_\_\_\_



$$l = 9 \text{ inches} \quad w = 4.1 \text{ inches}$$



$$s = 6.5 \text{ inches}$$



$$l = 7.8 \text{ ft} \quad w = 5.9 \text{ ft}$$

Area: \_\_\_\_\_  
Perimeter: \_\_\_\_\_  
Type: \_\_\_\_\_

Area: \_\_\_\_\_  
Perimeter: \_\_\_\_\_  
Type: \_\_\_\_\_

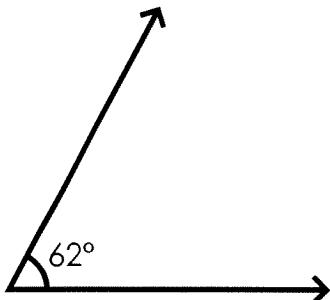
Area: \_\_\_\_\_  
Perimeter: \_\_\_\_\_  
Type: \_\_\_\_\_

Name: \_\_\_\_\_

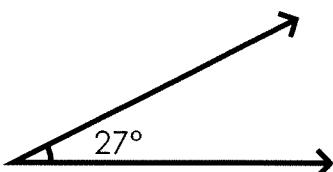
# Complements and Supplements

Find the complement to each angle.

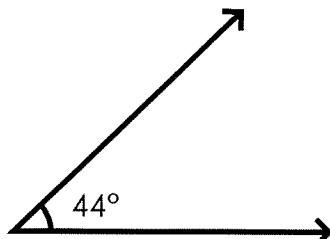
a.



b.



c.



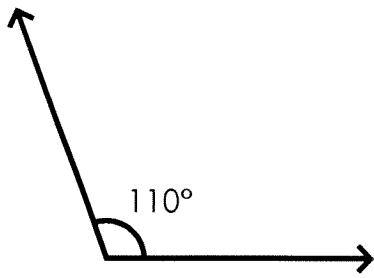
complementary angle: \_\_\_\_\_

complementary angle: \_\_\_\_\_

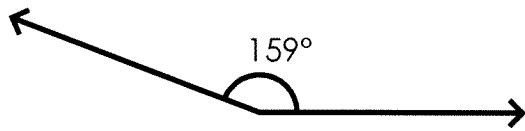
complementary angle: \_\_\_\_\_

Find the supplement to each angle.

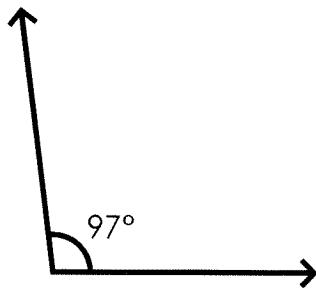
d.



e.



f.

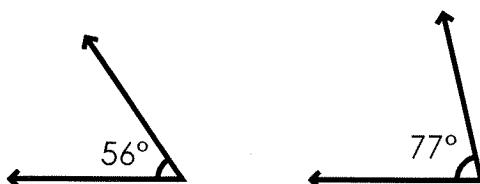
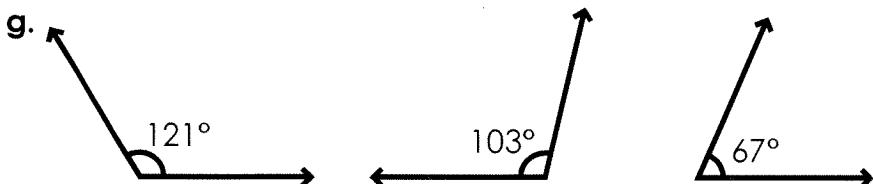


supplementary angle: \_\_\_\_\_

supplementary angle: \_\_\_\_\_

supplementary angle: \_\_\_\_\_

Circle the pair of angles that are supplements.



Tell whether each pair of angle measurements are complementary, supplementary, or neither.

h.  $36^\circ, 24^\circ$

i.  $147^\circ, 33^\circ$

j.  $18^\circ, 72^\circ$

k.  $51^\circ, 39^\circ$

l.  $67^\circ, 105^\circ$

m.  $96^\circ, 84^\circ$