

8th Grade Math Summer Packet 2026

This packet provides practice on pre-requisite skills needed for Math 8 concepts, as well as a preview for Unit 1 of 8th Grade Math.

Prerequisite Skills	p. 2-11
Prerequisite Skills answer keys	p. 12-21
Unit 1 Parent Letter	p. 22
Unit 1 Practice	p. 23-27
Answer Keys	p. 28

INTEGERS

Add.

1. $(-3) + (-7) =$ _____

2. $(-30) + 9 =$ _____

3. $42 + (-45) =$ _____

4. $(-55) + (-7) =$ _____

5. $3 + (-6) + 12 =$ _____

6. $(-9) + (-6) + (-15) =$ _____

Subtract.

1. $15 - (-3) =$ _____

2. $(-7) - 1 =$ _____

3. $(-14) - (-6) =$ _____

4. $3 - (-4) =$ _____

5. $(-1) - 6 - (-9) =$ _____

6. $21 - (-12) - 12 =$ _____

Multiply or divide.

1. $(-4) \bullet (-10) =$ _____

2. $86 \bullet (-6) =$ _____

3. $(-52) \div 13 =$ _____

4. $164 \div (-4) =$ _____

5. $(-5) \bullet (-13) \bullet (-4) =$ _____

6. $204 \div (-3) \bullet (-7) =$ _____

Find each absolute value.

1. $|-15| =$ _____

2. $|11 - 14| =$ _____

3. $|-5,187| =$ _____

4. $|(-43) \bullet (-8)| =$ _____



Challenge Problem!

Evaluate.

1. $[2 + (-4)] + 5 - [(-11) \bullet (-2)] - (-7) =$ _____

NUMBER PATTERNS, EXPRESSIONS, & EQUATIONS

Write the next three terms of the pattern.

1. 100, 91, 82, 73, ... _____, _____, _____

2. 2, 9, 16, 23, ... _____, _____, _____

3. 1, 1, 2, 3, 5, 8, ... _____, _____, _____

Solve.

1. $x - 7 = 86$

2. $7 + 3y = 22$

3. $5b = 60$

4. $\frac{f}{6} = 30$

5. $7w + 3 = 52$

6. $5x - 7 = 118$

Evaluate for the given value.

1. $4x - 5$, for $x = 7$

2. $(a \div b)^2 + (a \bullet b)$, for $a = 77$ & $b = 11$

3. $\frac{50 - x}{y - 3}$, for $x = 5$ & $y = 6$

4. $(b - c)^2 \bullet (b + c)$, for $b = 9$ & $c = 3$

Evaluate each expression.

1. $(2 + 1)^4 \div 9 - 4 =$ _____ 2. $(5 \cdot 3 \cdot 2) - (63 \div 7) =$ _____

3. $\frac{3}{4} \bullet 4 + 6^2 \div 9 =$ _____ 4. $[(9 - 7)^5 + 17] \div (7) =$ _____

Translate each statement into an expression or equation.

1. Five more than a number x . _____
2. A number x less seventeen. _____
3. The product of sixty and a number x is thirty. _____

Find the GCF or LCM for each.

1. The GCF of 24 & 32 is _____.
2. The LCM of 12 & 16 is _____.
3. The GCF of 18, 30, & 60 is _____.
4. The LCM of 3, 12, & 15 is _____.

Write the prime factorization of each number.

1. $54 =$ _____
2. $57 =$ _____

FRACTIONS/DECIMALS/PERCENTS

Use $>$, $<$, or $=$ to compare each pair of numbers.

- $\frac{7}{8}$ _____ 0.82
- -0.63 _____ $-\frac{5}{8}$
- $1\frac{4}{5}$ _____ $\frac{21}{12}$
- $-3\frac{1}{4}$ _____ $-3\frac{6}{25}$
- $\frac{15}{27}$ _____ $\frac{16}{24}$
- $\frac{8}{25}$ _____ 0.32

Write each percent as a decimal and as a fraction/mixed number in lowest terms.

	Decimal	Fraction/Mixed Number
1. 82%	_____	_____
2. 60%	_____	_____
3. 8%	_____	_____
4. 135%	_____	_____

Order each group of numbers from least to greatest. Write your answer on the line.

- $0.7, 0.\overline{7}, \frac{3}{4}, \frac{7}{8}$
 - $-2\frac{2}{3}, -2\frac{2}{5}, -2.1, -2.25$
- _____

Challenge Problem!



Complete the statement using $>$, $<$, or $=$.

- 25% of 80 _____ 125% of 12

FRACTION OPERATIONS

Add, subtract, multiply, or divide. All answers must be in fraction/mixed number form.

1. $7\frac{3}{11} - 4\frac{13}{33} =$ _____

2. $5\frac{9}{20} + 1\frac{3}{5} =$ _____

3. $7\frac{3}{5} - \frac{4}{5} =$ _____

4. $\left(\frac{3}{8}\right) + \left(\frac{9}{20}\right) =$ _____

5. $4 \cdot \frac{3}{5} =$ _____

6. $\frac{3}{8} \div \frac{7}{12} =$ _____

7. $\left(6\frac{3}{16}\right) \cdot \left(3\frac{1}{5}\right) =$ _____

8. $15 \div \left(4\frac{1}{6}\right) =$ _____

DECIMAL OPERATIONS

Add, subtract, multiply, or divide. All answers must be in decimal form.

1. $0.1465 + 0.28 =$ _____

2. $13.87 - 6.8412 =$ _____

3. $(7.039) \cdot (0.04) =$ _____

4. $(4.844) \div (0.56) =$ _____

5. $11.57 - 9.283 =$ _____

6. $(1.4678) + (21.564) =$ _____

7. $(9.767) \cdot (4.089) =$ _____

8. $(37.41) \div (4.3) =$ _____

GEOMETRY & MEASUREMENT

L

Write your answer on the line.

1. What is the approximate measure of this angle? _____



2. What kind of angle is this? _____



3. If $\angle 1$ measures 56° , what is its complement? _____

4. If $\angle 1$ measures 56° , what is its supplement? _____

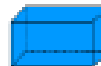
5. How many faces does this figure have? _____



6. How many vertices does this figure have? _____

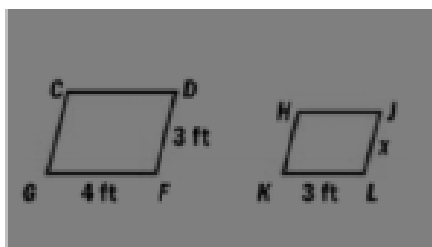


7. How many edges does this figure have? _____



In the following diagram, $CDFG \sim HJLK$. Use this information to find the value of x .

1. $x =$ _____



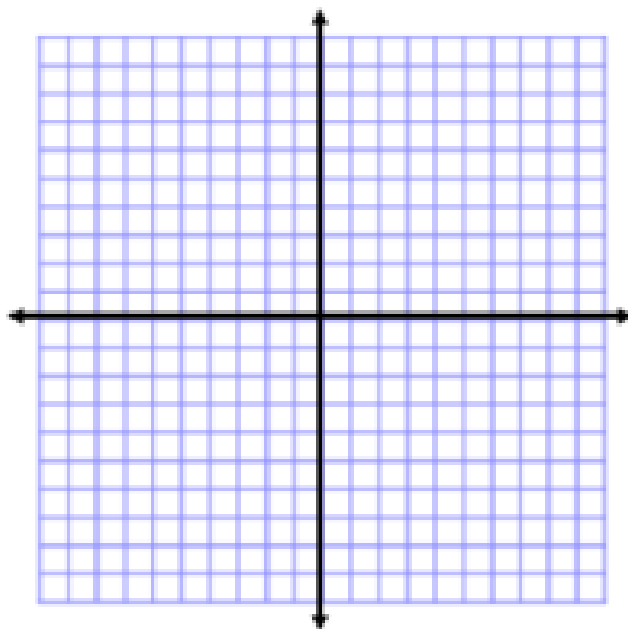
Name the quadrant or place in which each point lies.

1. $(-4, -2)$ _____ 2. $(0, -7)$ _____ 3. $(0, 0)$ _____

4. $(6, -9)$ _____ 5. $(3, 5)$ _____ 6. $(8, 0)$ _____

Graph and label (with letters) these figures on the same plane.

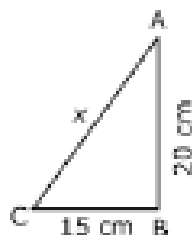
1. PQRS: P(-2,4), Q(-5,4), R(-8,0), S(-2,0)
TUVW: T(4,8), U(8,8), V(8,0), W(4,0)
ABC: A(0,-3), B(0,-7), C(-6,-7)



Challenge Problem!

Find the length of the missing side of this right triangle.

1.



RATIOS, PROPORTIONS, & PERCENTS

Find the unit rate.

1. $\frac{\$56}{8\text{bs}}$ = _____

2. 7 phone calls in 2 hours = _____

Write the ratio as a fraction in simplest form.

1. 65 to 130 = _____

2. $\frac{18}{63}$ = _____

Solve each proportion by cross-multiplying.

1. $\frac{20}{x} = \frac{16}{5}$

2. $\frac{y}{22} = \frac{11}{5.5}$

3. $\frac{3.6}{3} = \frac{b}{14.4}$

Find each value.

1. 40% of 25 is what number? _____

2. 18 is 75% of what number? _____

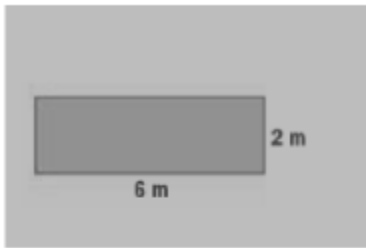
3. What percent of 600 is 180? _____

4. The cost of a meal is \$35.27 and you leave an 18% tip. What is the total cost of the meal? Round to the nearest cent. _____

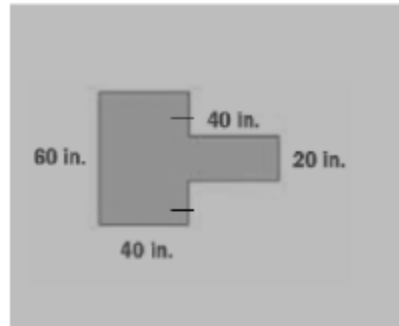
PERIMETER, AREA, & VOLUME

Find the perimeter of each polygon.

1.

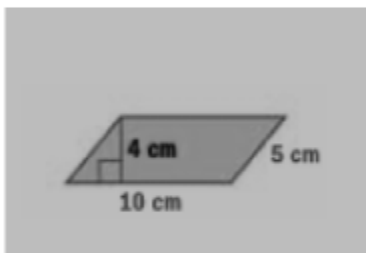


2.

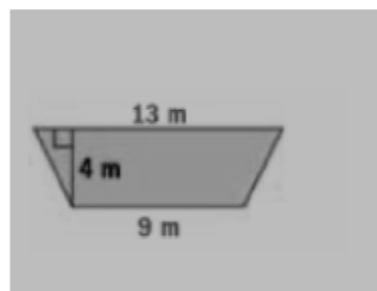


Find the area of each polygon.

1.

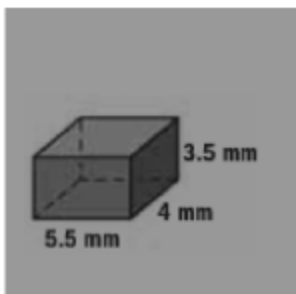


2.

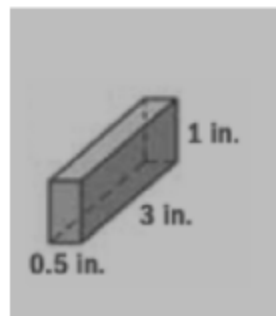


Find the volume of each figure.

1.



2.



INTEGERS

Add.

1. $(-3) + (-7) = \underline{-10}$

2. $(-30) + 9 = \underline{-21}$

3. $42 + (-45) = \underline{-3}$

4. $(-55) + (-7) = \underline{-62}$

5. $3 + (-6) + 12 = \underline{9}$
 $\quad -3 + 12$

6. $(-9) + (-6) + (-15) = \underline{-30}$

Subtract.

1. $15 - (-3) = \underline{18}$

2. $(-7) - 1 = \underline{-8}$

3. $(-14) - (-6) = \underline{-8}$

4. $3 - (-4) = \underline{7}$

5. $(-1) - 6 - (-9) = \underline{2}$

6. $21 - (-12) - 12 = \underline{21}$

Multiply or divide.

1. $(-4) \cdot (-10) = \underline{40}$

2. $86 \cdot (-6) = \underline{-516}$

3. $(-52) \div 13 = \underline{-4}$

4. $164 \div (-4) = \underline{-41}$

5. $(-5) \cdot (-13) \cdot (-4) = \underline{-260}$

6. $204 \div (-3) \cdot (-7) = \underline{476}$

Find each absolute value.

1. $|-15| = \underline{15}$

2. $|11 - 14| = \underline{3}$

3. $|-5,187| = \underline{5,187}$

4. $|(-43) \cdot (-8)| = \underline{344}$



Challenge Problem!

Evaluate.

1. $[2 + (-4)] + 5 - [(-11) \cdot (-2)] - (-7) = \underline{-12}$
 $[-2] + 5 - [22] + 7$
 $3 - 22 + 7$

2

NUMBER PATTERNS, EXPRESSIONS, & EQUATIONS

Write the next three terms of the pattern.

1. 100, 91, 82, 73, ... 64 , 55 , 46

2. 2, 9, 16, 23, ... 30 , 37 , 44

3. 1, 1, 2, 3, 5, 8, ... 13 , 21 , 34

$1+1=2, 1+2=3, 2+3=5, 3+5=8, 5+8=13, 8+13=21, 13+21=34$

Solve.

1. $x - 7 = 86$
 $+7 \quad +7$
 $x = 93$

2. $7 + 3y = 22$
 $-7 \quad -7$
 $3y = 15$
 $y = 5$

3. $\frac{5b - 60}{5} = \frac{60}{5}$
 $b = 12$

4. ~~$\frac{f}{6} = 30 \cdot 6$~~
 $f = 180$

5. $7w + 3 = 52$
 $-3 \quad -3$
 $7w = 49$
 $w = 7$

6. $5x - 7 = 118$
 $+7 \quad +7$
 $5x = 125$
 $x = 25$

Evaluate for the given value.

1. $4x - 5$, for $x = 7$

23
 $4(7) - 5$
 $28 - 5$

2. $(a \div b)^2 + (a \cdot b)$, for $a = 77$ & $b = 11$

896
 $(77 \div 11)^2 + (77 \cdot 11)$
 $7^2 + 847$
 $49 + 847$

3. $\frac{50 - x}{y - 3}$, for $x = 5$ & $y = 6$

15
 $\frac{50 - (5)}{(6) - 3} = \frac{45}{3}$

4. $(b - c)^2 \cdot (b + c)$, for $b = 9$ & $c = 3$

432
 $(9 - 3)^2 \cdot (9 + 3)$
 $6^2 \cdot 12$
 $36 \cdot 12$

Evaluate each expression.

1. $(2+1)^4 - 9 - 4 = \underline{5}$
 $3^4 \div 9 - 4$
 $81 \div 9 - 4$
 $9 - 4$

2. $(5 \cdot 3 \cdot 2) - (63 \div 7) = \underline{21}$
 $30 - 9$

3. $\left[\frac{3}{4} \cdot 4\right] + 6^2 \div 9 = \underline{7}$
 $3 + 36 \div 9$
 $3 + 4$

4. $[(9-7)^2 + 17] \div (7) = \underline{7}$
 $[2^2 + 17] \div 7$
 $[32 + 17] \div 7$
 $49 \div 7$

Translate each statement into an expression or equation.

1. Five ⁺more than a number x . $\underline{5+x \text{ or } x+5}$

2. A number x ⁻less seventeen. $\underline{x-17}$

3. The _xproduct of sixty and a number x is thirty. $\underline{60x=30}$

Find the GCF or LCM for each.

1. The GCF of 24 & 32 is $\underline{8}$.

2. The LCM of 12 & 16 is $\underline{48}$.

3. The GCF of 18, 30, & 60 is $\underline{6}$.

4. The LCM of 3, 12, & 15 is $\underline{60}$.

Write the prime factorization of each number.

1. $51 = \underline{2 \cdot 3 \cdot 3 \cdot 3}$
 $\begin{array}{l} 51 \\ \swarrow \searrow \\ 2 \quad 27 \\ \quad \swarrow \searrow \\ \quad 3 \quad 9 \\ \quad \quad \swarrow \searrow \\ \quad \quad 3 \quad 3 \end{array}$

2. $57 = \underline{3 \cdot 19}$
 $\begin{array}{l} 57 \\ \swarrow \searrow \\ 3 \quad 19 \end{array}$

FRACTIONS/DECIMALS/PERCENTS

Use $>$, $<$, or $=$ to compare each pair of numbers.

1. $\frac{7}{8} > 0.82$ 2. $-0.63 < -\frac{5}{8}$ 3. $1\frac{4}{5} > \frac{21}{12}$
 0.875 -0.625
4. $-3\frac{1}{4} < -3\frac{6}{25}$ 5. $\frac{15}{27} < \frac{16}{24}$ 6. $\frac{8}{25} = 0.32$
 -3.25 -3.24 $0.\bar{5}$ $0.\bar{6}$ 0.32

Write each percent as a decimal and as a fraction/mixed number in lowest terms.

- | | Decimal | Fraction/Mixed Number |
|---------|-------------|---|
| 1. 82% | <u>0.82</u> | <u>$\frac{82}{100} = \frac{41}{50}$</u> |
| 2. 60% | <u>0.60</u> | <u>$\frac{60}{100} = \frac{3}{5}$</u> |
| 3. 8% | <u>0.08</u> | <u>$\frac{8}{100} = \frac{2}{25}$</u> |
| 4. 135% | <u>1.35</u> | <u>$1\frac{35}{100} = 1\frac{7}{20}$</u> |

Order each group of numbers from least to greatest. Write your answer on the line.

1. $0.7, 0.\bar{7}, \frac{3}{4}, \frac{7}{8}, 0.875$ 2. $-2.\bar{6}, -2.4, -2\frac{2}{3}, -2\frac{2}{5}, -2.1, -2.25$
- $0.7, \frac{3}{4}, 0.\bar{7}, \frac{7}{8}$ $-2\frac{2}{3}, -2\frac{2}{5}, -2.25, -2.1$

Challenge Problem!



Complete the statement using $>$, $<$, or $=$.

1. 25% of 80 $>$ 125% of 12
 $.25(80)$ $1.25(12)$
 20 15

FRACTION OPERATIONS

Add, subtract, multiply, or divide. All answers must be in fraction/mixed number form.

$$1. \quad 7\frac{3}{11} - 4\frac{13}{33} = 2\frac{29}{33}$$

$$7\frac{3 \times 3}{11 \times 3} = 7\frac{9}{33} = 6\frac{42}{33}$$

$$\begin{array}{r} - 4\frac{13}{33} \\ \hline 2\frac{29}{33} \end{array}$$

$$3. \quad 6\frac{8}{5} - \frac{4}{5} = 6\frac{4}{5}$$

$$2. \quad 5\frac{9}{20} + 1\frac{3}{5} = 7\frac{1}{20}$$

$$5\frac{9}{20} = 5\frac{9}{20}$$

$$+ 1\frac{3}{5} = 1\frac{12}{20}$$

$$\hline 6\frac{21}{20} = 7\frac{1}{20}$$

$$4. \quad \left(\frac{3}{8}\right) + \left(\frac{9}{20}\right) = \frac{33}{40}$$

$$\frac{3 \times 5}{8 \times 5} = \frac{15}{40}$$

$$+ \frac{9 \times 2}{20 \times 2} = \frac{18}{40}$$

$$\hline \frac{33}{40}$$

$$5. \quad \frac{4}{1} \cdot \frac{3}{5} = \frac{12}{5}$$

$$6. \quad \frac{3}{8} \div \frac{7}{12} = \frac{9}{14}$$

$$2\frac{3}{8} \times \frac{123}{7} = \frac{9}{14}$$

$$7. \quad \left(6\frac{3}{16}\right) \cdot \left(3\frac{1}{5}\right) = \frac{99}{5} = 19\frac{4}{5}$$

$$\frac{99}{16} \times \frac{16}{5} = \frac{99}{5} = 19\frac{4}{5}$$

$$8. \quad 15 + \left(4\frac{1}{6}\right) = \frac{18}{5} = 3\frac{3}{5}$$

$$3\frac{18}{5} \times \frac{6}{25} = \frac{18}{5} = 3\frac{3}{5}$$

DECIMAL OPERATIONS

Add, subtract, multiply, or divide. All answers must be in decimal form.

1. $0.1465 + 0.28 = \underline{0.4265}$

$$\begin{array}{r} 0.1465 \\ + 0.2800 \\ \hline 0.4265 \end{array}$$

2. $13.87 - 6.8412 = \underline{7.0288}$

$$\begin{array}{r} 13.8700 \\ - 6.8412 \\ \hline 7.0288 \end{array}$$

3. $(7.039) \cdot (0.04) = \underline{.28156}$

$$\begin{array}{r} 7.039 \\ \times .04 \\ \hline .28156 \end{array}$$

4. $(4.844) \div (0.56) = \underline{8.65}$

$$.56 \overline{)4.844}$$

5. $11.57 - 9.283 = \underline{2.287}$

$$\begin{array}{r} 11.570 \\ - 9.283 \\ \hline 2.287 \end{array}$$

6. $(1.4678) + (21.564) = \underline{23.0318}$

$$\begin{array}{r} 1.4678 \\ + 21.5640 \\ \hline 23.0318 \end{array}$$


7. $(9.767) \cdot (4.089) = \underline{39.937263}$

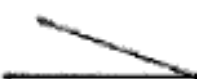
8. $(37.41) \div (4.3) = \underline{8.7}$

GEOMETRY & MEASUREMENT

L


Write your answer on the line.


1. What is the approximate measure of this angle? 100° 

2. What kind of angle is this? acute 

3. If $\angle 1$ measures 56° , what is its complement? 34°

4. If $\angle 1$ measures 56° , what is its supplement? 124°

5. How many faces does this figure have? 6 

6. How many vertices does this figure have? 10 

7. How many edges does this figure have? 12 

In the following diagram, $CDFG \sim HJKL$. Use this information to find the value of x .

1. $x = \frac{9}{4}$
2 1/4 ft

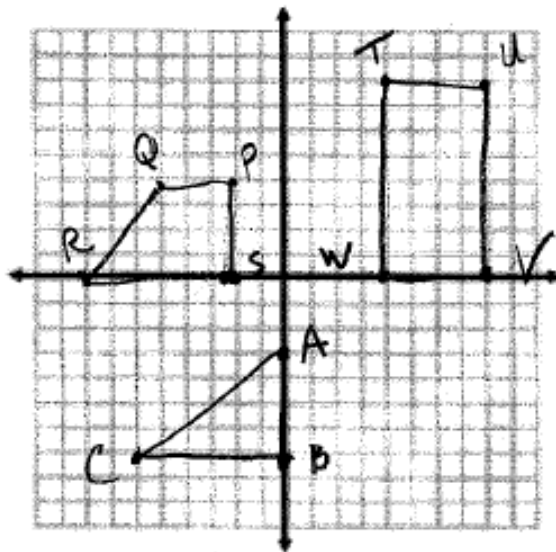


Name the quadrant or place in which each point lies.

1. $(-4, -2)$ 3 2. $(0, -7)$ y-axis 3. $(0, 0)$ origin
4. $(6, -9)$ 4 5. $(3, 5)$ 1 6. $(8, 0)$ x-axis

Graph and label (with letters) these figures on the same plane.

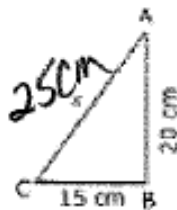
1. PQRS: P(-2,4), Q(-5,4), R(-8,0), S(-2,0)
 TUVW: T(4,8), U(8,8), V(8,0), W(4,0)
 ABC: A(0,-3), B(0,-7), C(-6,-7)



Challenge Problem!

Find the length of the missing side of this right triangle. $a^2 + b^2 = c^2$

1.



$$15^2 + 20^2 = c^2$$

$$225 + 400 = c^2$$

$$\sqrt{625} = \sqrt{c^2}$$

$$c = 25\text{cm}$$

RATIOS, PROPORTIONS, & PERCENTS

Key

Find the unit rate.

1. $\frac{\$56}{8\text{lbs}} = \underline{\$7 \text{ per pound}}$ 2. $7 \text{ phone calls in 2 hours} = \underline{3.5 \text{ phone calls Per hour}}$

Write the ratio as a fraction in simplest form.

1. $65 \text{ to } 130 = \frac{65}{130} = \underline{\frac{1}{2}}$ 2. $\frac{18}{63} = \underline{\frac{2}{7}}$

Solve each proportion by cross-multiplying.

1. $\frac{20}{x} = \frac{16}{5}$

$$\frac{100}{16} = \frac{16x}{16}$$

$$\frac{25}{4} = x$$

2. $\frac{r}{22} = \frac{11}{5.5}$

$$\frac{5.5r}{5.5} = \frac{242}{5.5}$$

$$r = 44$$

3. $\frac{3.6}{3} = \frac{b}{14.4}$

$$\frac{3b}{3} = \frac{51.84}{3}$$

$$b = 17.28$$

Find each value.

1. 40% of 25 is what number? 10

2. 18 is 75% of what number? 24

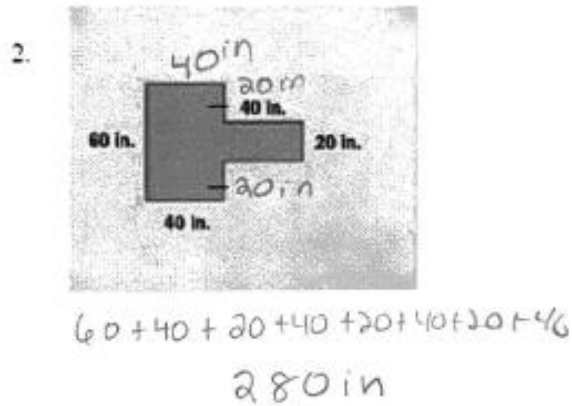
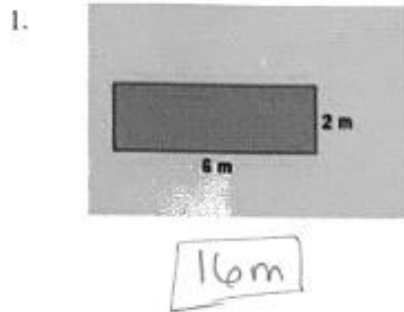
3. What percent of 600 is 180? 30%

4. The cost of a meal is \$35.27 and you leave an 18% tip. What is the total cost of the meal? Round to the nearest cent. \$41.62

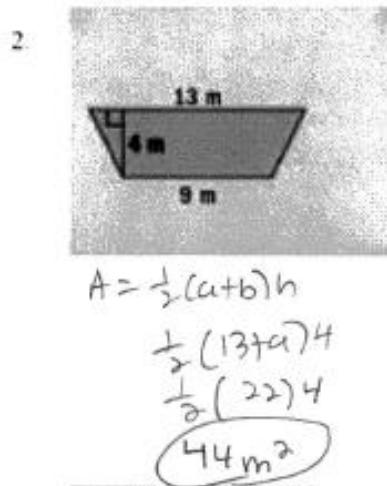
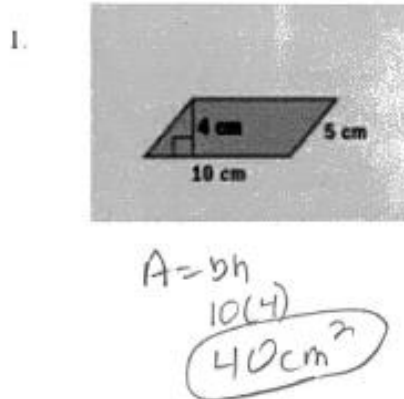
$$\begin{array}{r} 35.27 \\ + 6.35 \\ \hline 41.62 \end{array}$$

PERIMETER, AREA, & VOLUME

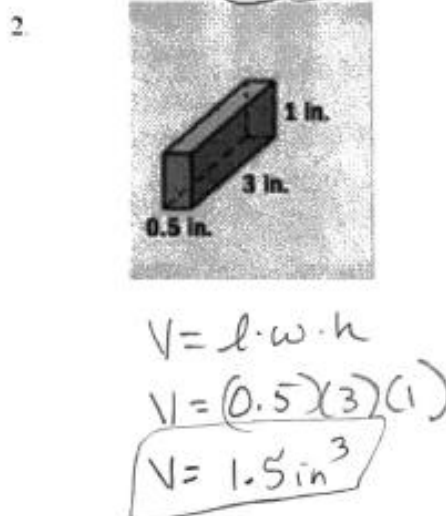
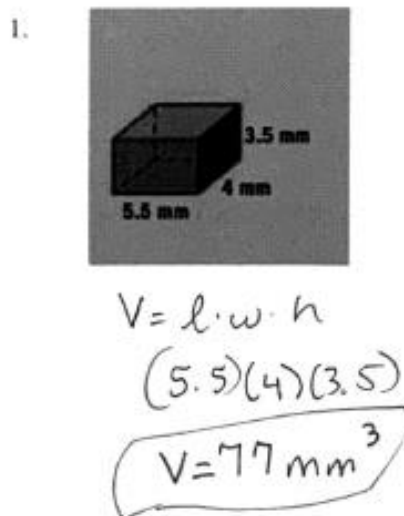
Find the perimeter of each polygon.



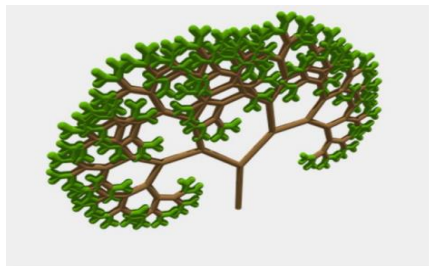
Find the area of each polygon.



Find the volume of each figure.



8th Grade Unit 1: Investigating Linear Expressions, Equations, and Inequalities in One Variable



Overview:

In this unit, students will incorporate patterning and algebraic reason to create, interpret, solve, and graph linear equations and inequalities in one variable that will contain rational coefficients and variables on both sides whose solutions require the distributive property and combining of like terms. Students will learn to interpret expressions with multiple factors and/or terms and manipulate linear and literal equations expressed in various forms.

Learning Targets:

In Unit 1, students will:

- Create and interpret expressions in relevant situations
- Describe and solve linear equations in one variable with one solution, infinite solutions, and no solutions
- Real-life applications of linear equations & inequalities in one variable
- Justify the steps of a one-solution equation or inequality
- Manipulate equations and inequalities that are formulas
- Use algebraic reasoning to manipulate all types of equations and formulas

Key Vocabulary: (linked to GA DOE Interactive Glossary)

Algebraic Properties	Coefficient	Equation	Equivalent Equation
Expression	Factor	Inverse Operations	Linear Equation in One Variable
Linear Inequality in One Variable	Literal Equation	Terms	Variable

Supporting Resources:

<http://ctlslearn.cobbk12.org/>

<https://gavirtual.instructure.com/courses/34331>

[Multi-Step Inequality Word Problems](#)

[Solving Linear Inequalities](#)

[Balancing Equations](#)

[Virtual Algebra Tiles](#)

[Solving Linear Equations](#)

[Solving Literal Equations](#)

Practice for Unit 1:

Solve each equation.

1) $-7 = n - 13$

2) $36 = p + 18$

3) $-8 = \frac{r}{5}$

4) $8b = -24$

5) $5 = 2 + \frac{k}{3}$

6) $9a - 7 = 2$

7) $-50 = -6 - 4r$

8) $7 + 7b = 126$

9) $1 + 5k + 5 = -19$

10) $-7n - 5 + 2 = -3$

11) $5a - 2a = 15$

12) $-4x + 5x = -4$

$$13) -8 - 8(1 - 4b) = -176$$

$$14) -4 - 7(p - 6) = 87$$

$$15) 6(1 - 2p) - 4p = -106$$

$$16) 6(x + 8) = 90$$

$$17) 7(3a - 2) = -6a - 14$$

$$18) -2x - 25 = 8 + 7(-7x + 2)$$

$$19) 2(b + 5) + 2 = 30 + 8b$$

$$20) -19 - 5x = -8(5 - 3x) - 8$$

$$21) 14 - 3m = 5(4 - 6m) - 6$$

$$22) 4 - 4(5 - 6b) = -16 - 6b$$

$$23) -4 - p = -2(5p + 7) + 7p$$

$$24) -34 + 6x = -4x + 6(5 + 7x)$$

$$25) -2(1 + 2v) + 4(v - 8) = -34$$

$$26) -1 = -(-4n + 7) + 3(2 + 8n)$$

$$27) -39 = 6(6 - 7n) + 5(4n + 7)$$

$$28) -64 = 3(a - 4) + 7(8a + 1)$$

$$29) 6(n - 3) - 5 = 19 - n$$

$$30) -5 + 5k = -6k - 5(1 - 6k)$$

$$31) 6 + 3(v - 2) = 3v$$

$$32) 21 - 3b = -7(8b - 3)$$

Solve each equation for the indicated variable.

$$33) \frac{k}{a} = w + v, \text{ for } a$$

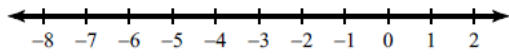
$$34) u = y - k + x, \text{ for } x$$

$$35) ma = pn, \text{ for } a$$

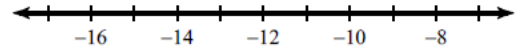
$$36) k - x = v + w, \text{ for } x$$

Solve each inequality and graph its solution.

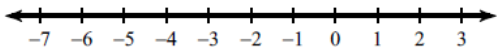
37) $-8 \geq r - 7$



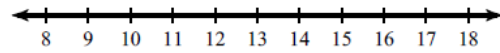
38) $-2 > \frac{k}{5}$



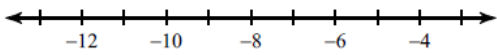
39) $-\frac{1}{5} > \frac{b}{10}$



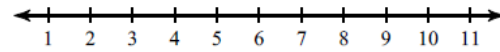
40) $\frac{11}{19} \leq \frac{m}{19}$



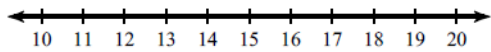
41) $-9(m - 3) > 81$



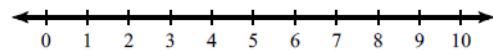
42) $\frac{1+n}{8} \leq 1$



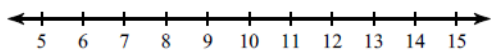
43) $-1 \geq -5 + \frac{p}{3}$



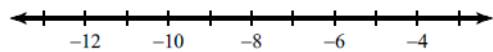
44) $28 \geq 4 + 3k$



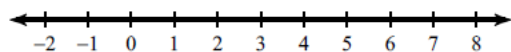
45) $-3(4 + 5n) > -132$



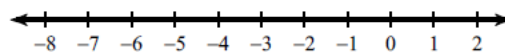
46) $288 \geq 8(1 - 5k)$



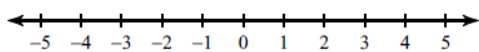
$$47) 5(1 + 7x) \leq 180$$



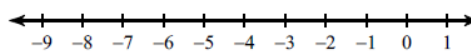
$$48) 122 \geq 3x + 4(-7x - 7)$$



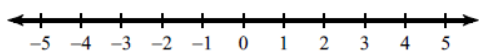
$$49) -5(6k - 5) > -11 + 6k$$



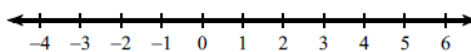
$$50) 19 + 2n < -3(5n + 5)$$



$$51) 40 + 5x < 8(-2x + 5) - 8x$$



$$52) -23 - 7n < 8(7n + 5)$$



Answers to

- 1) $\{6\}$ 2) $\{18\}$
 5) $\{9\}$ 6) $\{1\}$
 9) $\{-5\}$ 10) $\{0\}$
 13) $\{-5\}$ 14) $\{-7\}$
 17) $\{0\}$ 18) $\{1\}$
 21) $\{0\}$ 22) $\{0\}$
 25) $\{\text{All real numbers.}\}$ 26) $\{0\}$
 28) $\{-1\}$ 29) $\{6\}$
 31) $\{\text{All real numbers.}\}$ 32) $\{0\}$

34) $x = u - y + k$

35) $a = \frac{pn}{m}$

- 3) $\{-40\}$ 4) $\{-3\}$
 7) $\{11\}$ 8) $\{17\}$
 11) $\{5\}$ 12) $\{-4\}$
 15) $\{7\}$ 16) $\{7\}$
 19) $\{-3\}$ 20) $\{1\}$
 23) $\{-5\}$ 24) $\{-2\}$

33) $a = \frac{k}{w + v}$

36) $x = k - v - w$

