

Horizons

Pre-Algebra

Tests and Resources



1 Identify each number as *natural, whole, integer, rational, irrational, or real*.
Some numbers may have more than one answer.

24 points

	68	$-\sqrt{5}$	$2\frac{3}{8}$	-3	46.66	π	$\frac{5}{9}$	-0.07
Natural								
Whole								
Integer								
Rational								
Irrational								
Real								

2 Estimate the sum by rounding to the nearest thousand.

4 points

$$\begin{array}{r} 2903 \\ +1102 \\ \hline \end{array} \approx$$

$$\begin{array}{r} 7987 \\ +2019 \\ \hline \end{array} \approx$$

$$\begin{array}{r} 4176 \\ +8885 \\ \hline \end{array} \approx$$

$$\begin{array}{r} 3997 \\ +4009 \\ \hline \end{array} \approx$$

3 Estimate each product by rounding to the nearest ten.

4 points

$$21 \times 128 \approx \underline{\hspace{2cm}}$$

$$67 \times 32 \approx \underline{\hspace{2cm}}$$

$$58 \times 61 \approx \underline{\hspace{2cm}}$$

$$52 \times 48 \approx \underline{\hspace{2cm}}$$

4 Solve, using the rules for signed numbers.

14 points

$$(+48) + (+4) =$$

$$(+99) + (-72) =$$

$$(-2) + (+24) =$$

$$(+35) - (+71) =$$

$$(-3) - (-34) =$$

$$(-18) - (+82) =$$

$$(9)(11) =$$

$$(-6)(40) =$$

$$(5)(-6) =$$

$$(10)(13)(-1) =$$

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

$$(-11)(8)(-1) =$$

$$(-3)(-20) =$$

$$(-5)(-12)(-1) =$$

5 Solve, using the rules of absolute values.

10 points

$$|-2| + |-75| =$$

$$|97| - |93| =$$

$$|-3| + |56| =$$

$$-|-21| - |-18| =$$

$$|75| - |-9| =$$

$$|8 + 2| + |23 - 6| =$$

$$-|12| + |-4| =$$

$$-|16 - 2| + |6 - 9| =$$

$$-|79| - |-1| =$$

$$-|27 + 3| - |61 - 9| =$$

15 Solve.

$10^5 =$

$(10^2)(10^7) =$

$(10^{18}) \div (10^{11}) =$

$10^{-3} =$

$67.1 \times 10^2 =$

$0.038 \times 10^3 =$

$0.483 \times 10^{-1} =$

$69.15 \times 10^{-2} =$

$54.19 \div 10^0 =$

$3.45 \div 10^3 =$

$0.32 \div 10^{-1} =$

$0.04 \div 10^{-2} =$

16 Write an equation and solve.

2 points

At Billy's concession stand, a cheeseburger with potato chips costs 4 times as much as a candy-filled sucker and 2 pieces of bubble gum. If a candy-filled sucker costs 25 cents and bubble gum costs 5 cents each, how much does Billy charge for a cheeseburger with potato chips?

17 Multiply or divide the appropriate powers of 10 to complete the metric conversions.

8 points

0.3 km = _____ m

0.25 m = _____ mm

6.7 kL = _____ L

6.5 L = _____ cL

1794 L = _____ kL

6791 mL = _____ L

32.8 W = _____ kW

826 cm = _____ m

18 Solve the numerators to make equivalent fractions.

4 points

$\frac{3}{8} = \frac{\quad}{24}$

$\frac{2}{5} = \frac{\quad}{20}$

$\frac{9}{10} = \frac{\quad}{90}$

$\frac{5}{6} = \frac{\quad}{24}$

19 Complete the fraction-decimal equivalents.

8 points

$\frac{1}{2} =$

$\frac{1}{6} =$

$\frac{3}{4} =$

$\frac{2}{5} =$

0.25 =

$0.\overline{6} =$

0.625 =

0.4 =

20 Add, subtract, multiply, or divide as indicated.

4 points

$\frac{2}{3} + \frac{1}{4} =$


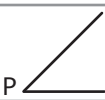
$\frac{4}{5} \times \frac{15}{16} =$

$\frac{7}{10} - \frac{2}{3} =$

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

108 points total

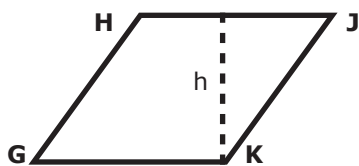
1 Complete the chart.

Figure	Drawing	Symbol
		
Line TV		
		\overline{RT}
Ray WX		
		
		$m \parallel n$

2 Find the perimeter and area of each figure.



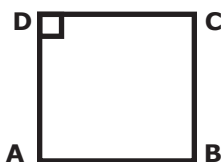
Given: $\square ABCD$; $AB = 20$; $BC = 10$; $h = 6$



Given: $\square GHJK$; $\overline{GH} \cong \overline{HJ}$; $GH = 8$; $h = 6$



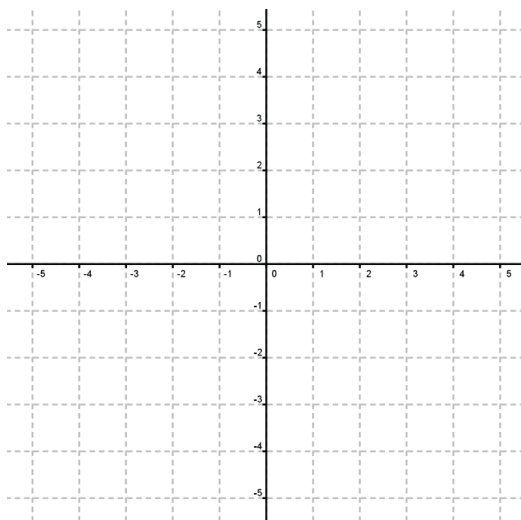
Given: $\square ABCD$; $DC = 9$; $CB = 5$



Given: $\square ABCD$; $DC = 11$; $CB = 11$

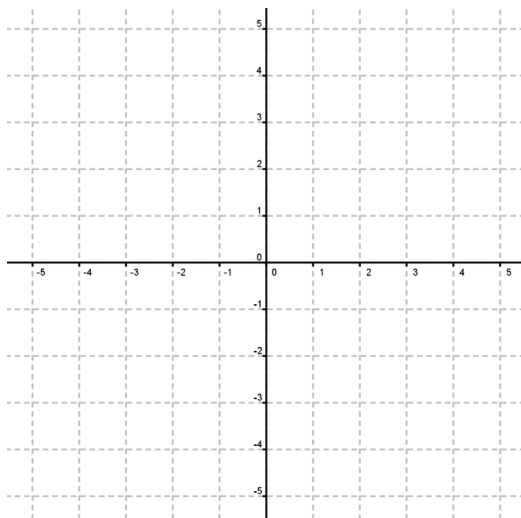
- 1 Plot the given points in blue and join them to form a polygon. Graph the flip over the x -axis in green and the flip over the y -axis in red.

(3, 1), (1, 3), and (2, 5)



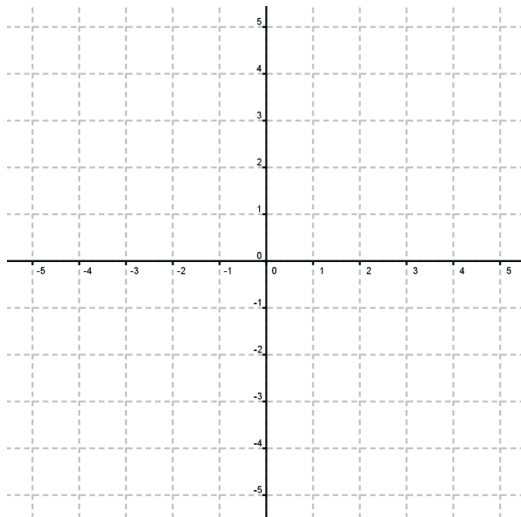
- 2 Plot the given points in blue and join them to form a polygon. Graph the turn 90° clockwise in green and the turn 90° counterclockwise in red.

(3, 1), (1, 3), and (2, 5)



- 3 Plot the given points in blue and join them to form a polygon. Graph the slide down 4 units in green and the slide left 2 units in red.

(3, 1), (1, 3), and (2, 5)



Formula Strips

For use in Lesson 71

English length equivalents:

1 mile = 5280 feet
1 mile = 1760 yards
1 yard = 3 feet
1 yard = 36 inches

English-Metric length equivalents:

1 inch = 2.54 cm
1 inch = 25.4 mm
1 yard = 0.91 meter
1 mile = 1.61 km

Metric-English length equivalents:

1 cm = 0.39 inch
1 meter = 1.09 yards
1 km = 0.62 mile

For use in Lesson 74

English length equivalents:

1 mile = 5280 feet
1 mile = 1760 yards
1 yard = 3 feet
1 yard = 36 inches

English-Metric length equivalents:

1 inch = 2.54 cm
1 inch = 25.4 mm
1 yard = 0.91 meter
1 mile = 1.61 km

Metric-English length equivalents:

1 cm = 0.39 inch
1 meter = 1.09 yards
1 km = 0.62 mile

For use on Exam 2

English length equivalents:

1 mile = 5280 feet
1 mile = 1760 yards
1 yard = 3 feet
1 yard = 36 inches

English-Metric length equivalents:

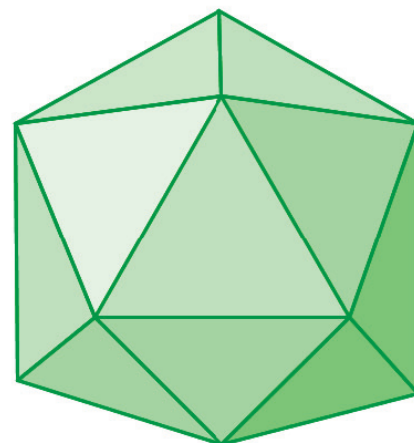
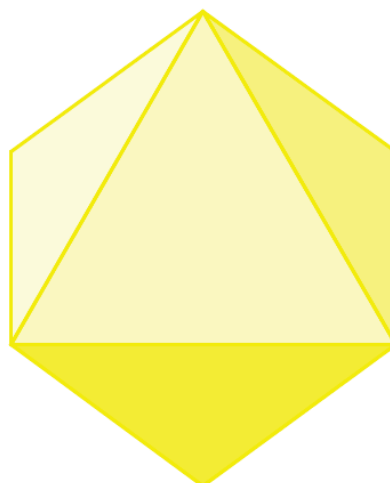
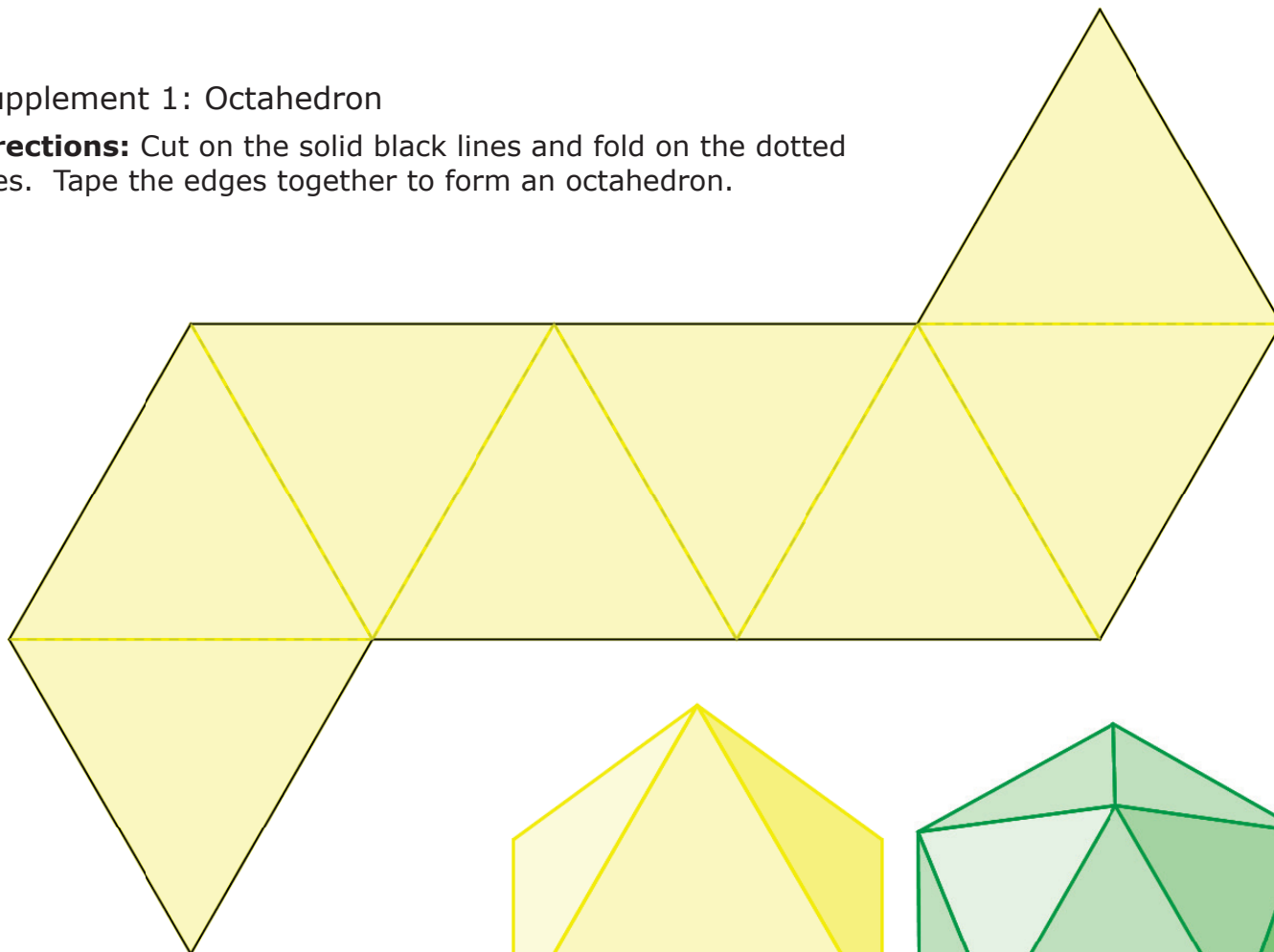
1 inch = 2.54 cm
1 inch = 25.4 mm
1 yard = 0.91 meter
1 mile = 1.61 km

Metric-English length equivalents:

1 cm = 0.39 inch
1 meter = 1.09 yards
1 km = 0.62 mile

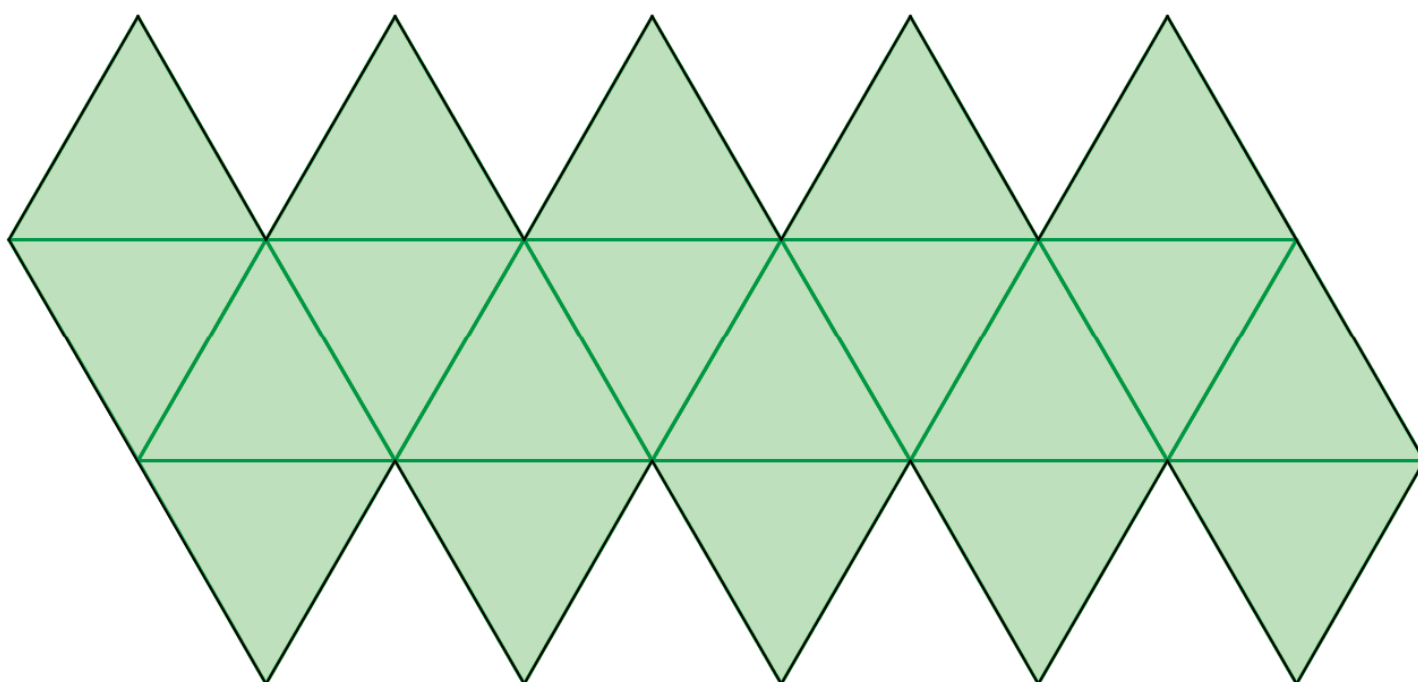
Supplement 1: Octahedron

Directions: Cut on the solid black lines and fold on the dotted lines. Tape the edges together to form an octahedron.



Supplement 3: Icosahedron

Directions: Cut on the solid black lines and fold on the solid green lines. Tape the edges together to form an icosahedron.



1	1	1	1	1	1	1	1	1	1	1	1	1	1
x							x					1	
x							x					1	
x							x					1	
x							x					1	
1													
1													
1													
x ²							x ²					1	
1													
1													
1													
1													
1													
x ²							x ²					1	
1													
1													
1													
1													