M-G Geometry 10/10 Week 5

Find the distance and midpoint

$$\begin{array}{cc} x & y \\ (-2, & 6) \end{array} \qquad \begin{array}{cc} x & y \\ (3, & -6) \end{array}$$

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$(3-(-2))^2$

$(3+2)^2$

$(5)^2$

25

$$\sqrt{(-2-3)^2 + (6-(-6))^2}$$

$$\sqrt{(-5)^2 + (12)^2}$$

$$\sqrt{25 + 144}$$

$$\sqrt{169} = \boxed{13}$$

Midpoint: $\left(\frac{x_2+x_1}{2}, \frac{y_2+y_1}{2}\right)$

$$\left(\frac{-2+3}{2}, \frac{6+(-6)}{2}\right)$$

$$\boxed{\left(\frac{1}{2}, 0\right)}$$

Look for perfect squares

$1, \boxed{4}, \cancel{9}, \boxed{16}, \cancel{25}, \cancel{36}, \cancel{49}, 64, 81, 100$

$+3 \quad +5 \quad +7 \quad +9 \quad +11 \quad +13 \quad +15 \quad +17 \quad +19$

$\sqrt{80}$

$\sqrt{4} \qquad \sqrt{20}$

$\sqrt{4} \qquad \sqrt{5}$

$$\sqrt{80} = \sqrt{4} \cdot \sqrt{4} \cdot \sqrt{5}$$

$$2 \cdot 2 \cdot \sqrt{5} = 4\sqrt{5}$$

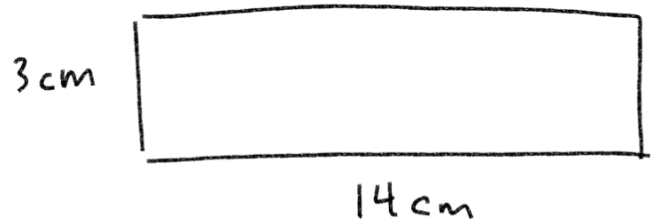
$\sqrt{80}$

$\sqrt{16} \qquad \sqrt{5}$

$$\sqrt{80} = \sqrt{16} \cdot \sqrt{5}$$

$$4\sqrt{5}$$

1.)



Find

Area: L * H

Perimeter: 2L + 2H

A: 14cm * 3cm = $\boxed{42\ cm^2}$

P = 2(14cm) + 2(3 cm)

28cm + 6 cm = $\boxed{34\ cm}$

2.)

A = πr^2

$= \pi (6\ m)^2$

$\boxed{36\pi\ m^2}$

C =

πd

$2\pi r$

$2\pi (6m)$

$\boxed{12\pi\ m}$

3.)

A = πr^2

$\pi \left(\frac{d}{2}\right)^2$

$\pi \left(\frac{22cm}{2}\right)^2$

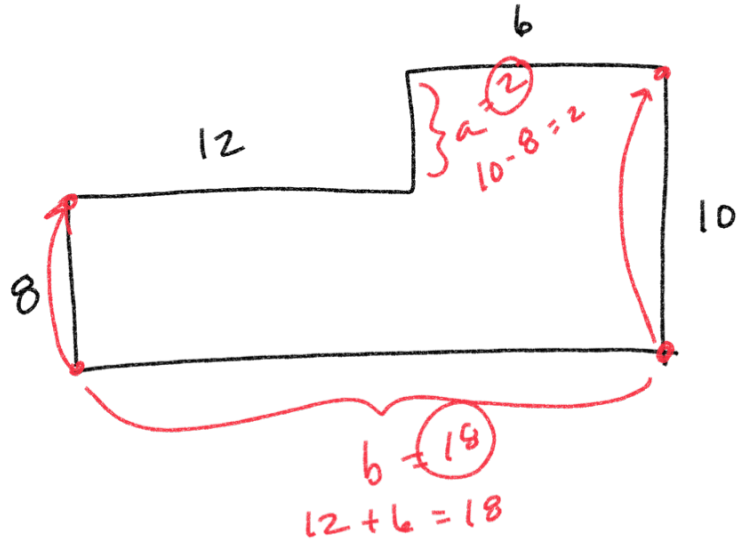
$\pi (11cm)^2$

$\boxed{121\pi\ cm^2}$

C = πd

$= \pi (22\ cm)$

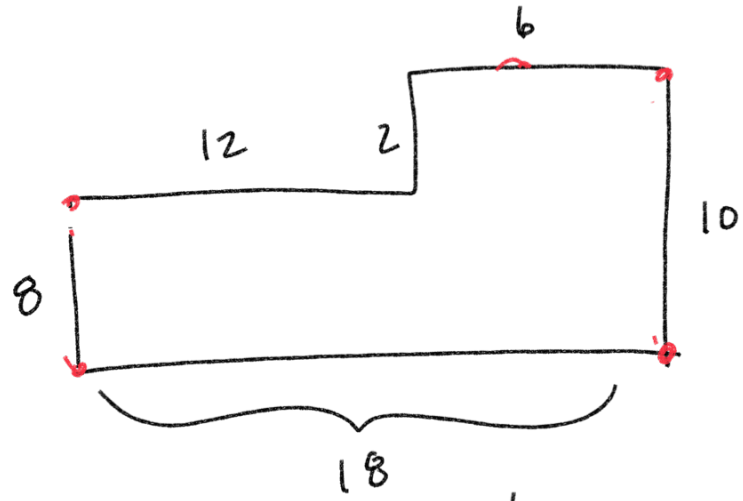
$\boxed{22\pi\ cm}$



Perimeter

8 + 12 + 2 + 6 + 10 + 18

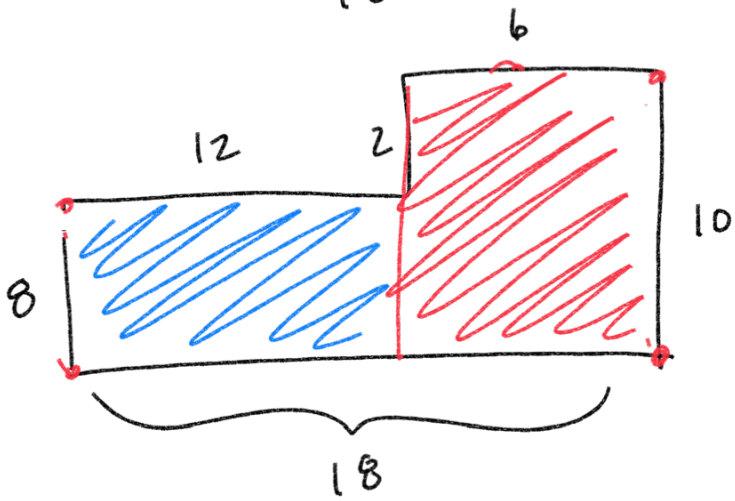
$\boxed{56\ units}$



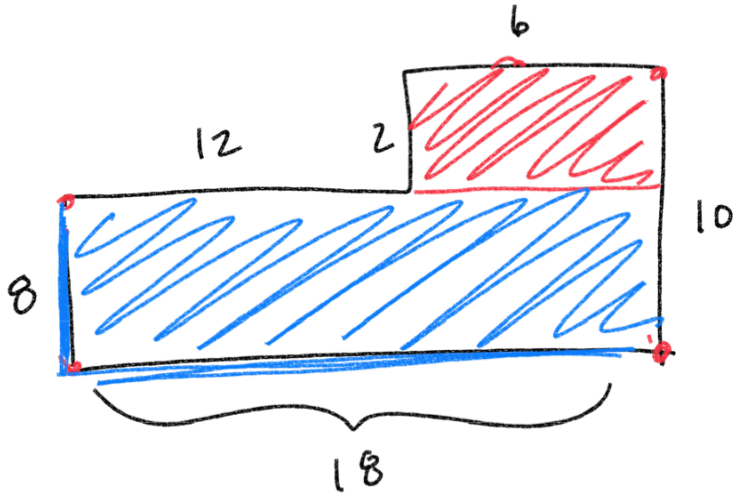
Area: Either sum of two figures

or

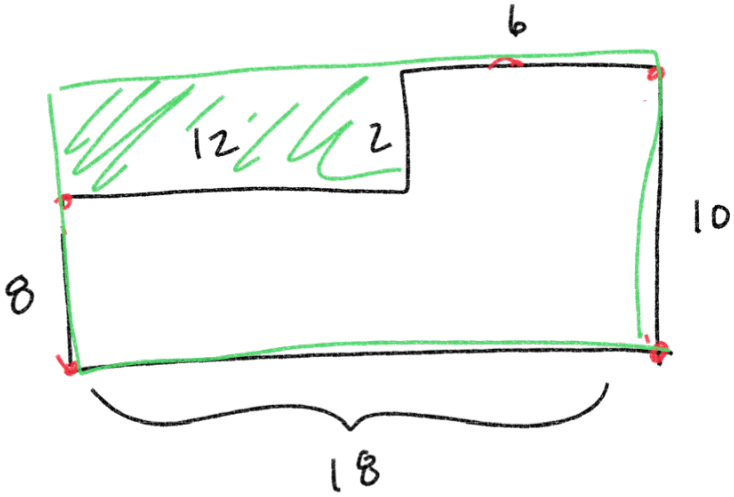
the subtraction of the missing piece from the whole



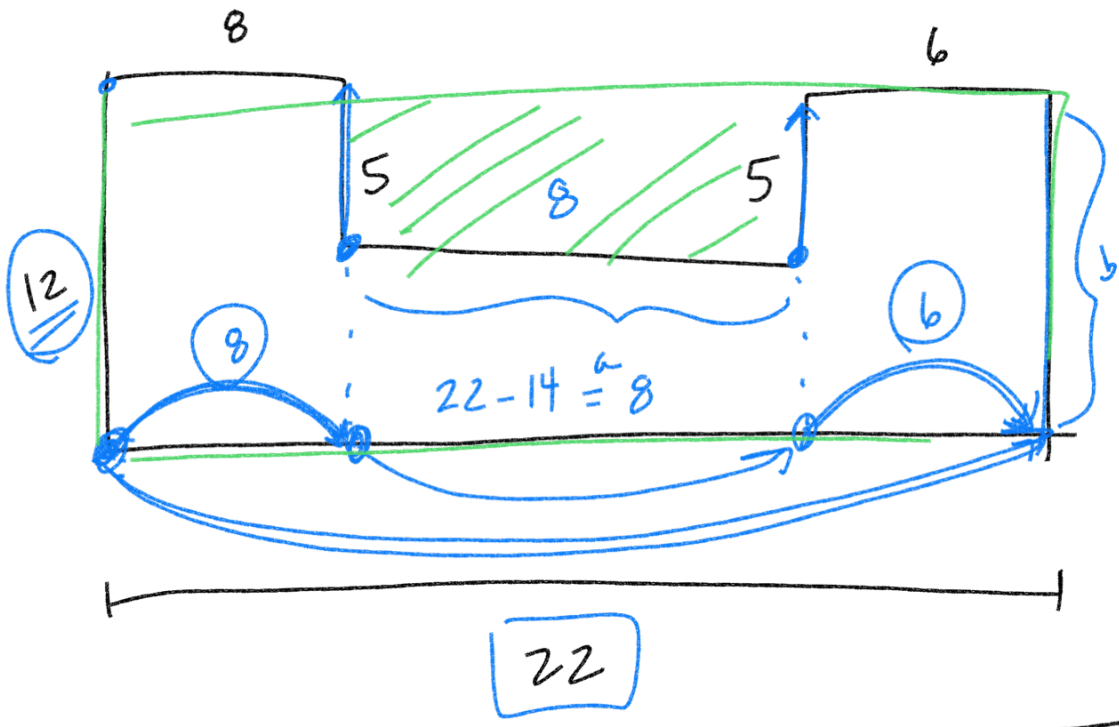
Blue		Red		
8 * 12		6 * 10		
96	+	60	=	156 units²



Blue		Red		
8 * 18		2 * 16		
144	+	12	=	156 units²



Whole		Missing		
18 * 10		2 * 12		
180	−	24	=	156 units²



Not drawn to scale!

Find perimeter and area

$P = 22 + 12 + 8 + 5 + 8 + 5 + 6 + 12 = \boxed{78 \text{ units}}$

whole - missing

$A = 22 * 12 - 5 * 8$

$264 - 40 = \boxed{224 \text{ units}^2}$

Geometry Chapter 1 Review

Find a pattern for the following sequences.

1.) 6, 10, 14, 18, 22…

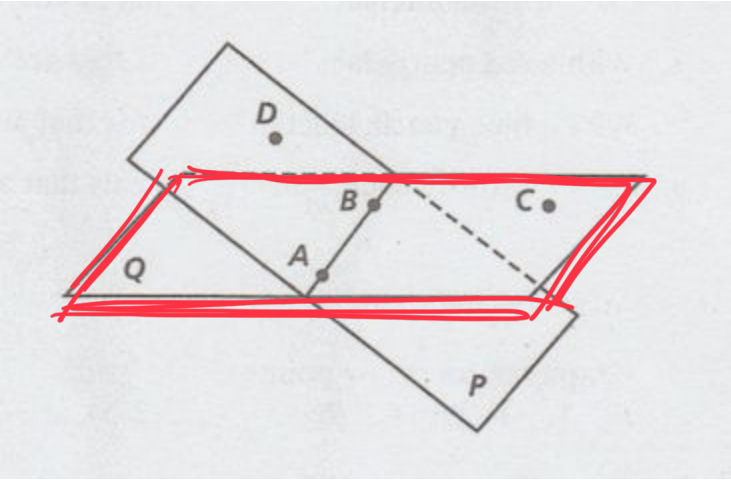
2.) 5, 8, 12, 17, 23…

3.) 60, 40, 30, 25, 22.5…

4.) -2, 6, -18, 54, -162...

Use the illustration to answer the following.

1.) What is the intersection of planes P and Q?



2.) List two pairs of collinear points.

3.) What is the minimum requirement for a plane? Include one from the illustration.

3 noncollinear points
or
A line and 1 noncollinear point

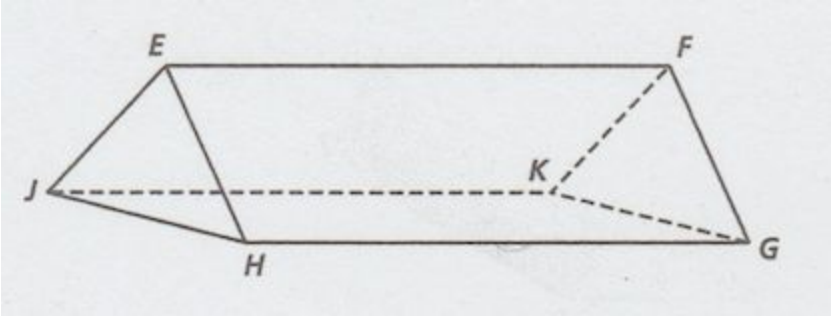
Plane Q
ABC

Plane P ABD

Use the illustration to answer the following.

1.) Name all of the segments parallel to EH.

2.) Name all segments skew to HG.



Include proper arrow format for each of the following.

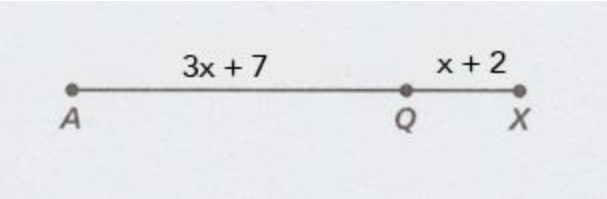
1.) Draw a line segment featuring points A and B.

2.) Draw line CD.

3.) Draw the ray XY.

If AX = 57, find the value of each of the following.

1.) AQ



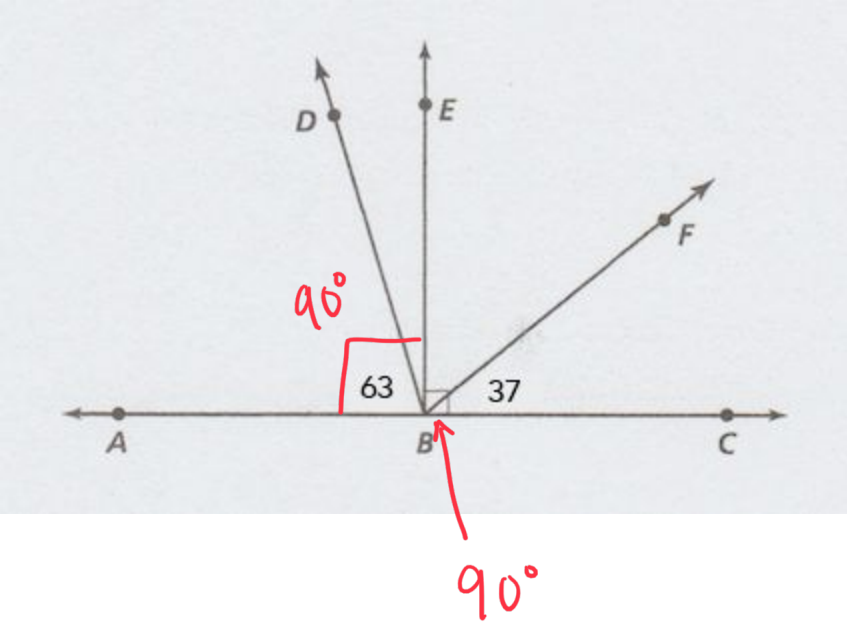
2.) x

Find the measure of each of the following angles.

1.) ∠DBE

2.) ∠DBF

3.) ∠DBC



FInd the distance between the points.

1.) (2, 4) and (-6, 7)

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

2.) (-1, -5) and (4, 7)

3.) (-7, 0) and (-3, 2)

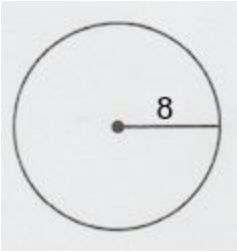
Find the midpoint of each segment.

$$\left(\frac{x_2+x_1}{2}, \frac{y_2+y_1}{2}\right)$$

1.) A (6, 7), B (-4, 1)

2.) C (5, -3), D (-9, 2)

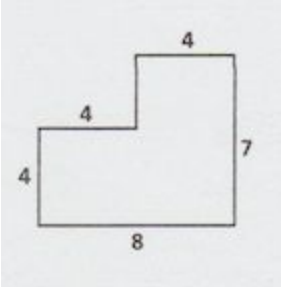
Find the circumference of the circle in terms of π.



Find the perimeter and area of a rectangle when:

b = 8 cm, h = 6 cm

FInd the perimeter and area for the following figure.



FInd the area of the circle in terms of π.