

# Algebra 1 Bellwork Friday, May 29, 2015

1. Find the midpoint for each pair of point given.

a) midpoint of  $(14, -9)$  &  $(6, -8)$  is \_\_\_\_\_

b) midpoint of  $(-7, -3)$  &  $(42, -3)$  is \_\_\_\_\_

2. Find the EXACT length of the segment connecting each pair of points.

a) length of segment connecting  $(7, 5)$  &  $(-9, 1)$  is:

b) length of segment connecting  $(6, -4)$  &  $(6, 11)$  is:

3. Find the perimeter of triangle ABC using the coordinates for vertices A, B, and C given below. Round to the nearest tenth when needed.

A(6, -3) B(-4, 3) C(1, -3) Perimeter =

4. Rationalize each denominator. Simplify as much as possible.

a)  $\frac{48c^5}{\sqrt{6c}}$

b)  $\frac{18w^2}{\sqrt{8w^3}}$

# Algebra 1 Bellwork Friday, May 29, 2015

1. Find the midpoint for each pair of point given.

a) midpoint of  $(14, -9)$  &  $(6, -8)$  is  $(10, -8.5)$   
 $(\frac{14+6}{2}, \frac{-9+(-8)}{2})$

b) midpoint of  $(-7, -3)$  &  $(42, -3)$  is  $(17.5, -3)$   
 $(\frac{-7+42}{2}, \frac{-3+(-3)}{2})$

2. Find the EXACT length of the segment connecting each pair of points.

a) length of segment connecting  $(7, 5)$  &  $(-9, 1)$  is:

$$\sqrt{(7-(-9))^2 + (5-1)^2} = \sqrt{16^2 + 4^2} = \sqrt{272} = \sqrt{16 \cdot 17} = 4\sqrt{17}$$

b) length of segment connecting  $(6, -4)$  &  $(6, 11)$  is:

$$11 - (-4) = 15$$

3. Find the perimeter of triangle ABC using the coordinates for vertices A, B, and C given below. Round to the nearest tenth when needed.

A(6, -3) B(-4, 3) C(1, -3)

Perimeter =  $11.7 + 7.8 + 5 = 24.5$

$$AB = \sqrt{(6-(-4))^2 + (-3-3)^2} = 11.7$$

$$BC = \sqrt{(1-(-4))^2 + (-3-3)^2} = 7.8$$

$$AC = 6 - 1 = 5$$

4. Rationalize each denominator. Simplify as much as possible.

a)  $\frac{48c^5}{\sqrt{6c}} \cdot \frac{\sqrt{6c}}{\sqrt{6c}}$

$$= \frac{48c^5 \sqrt{6c}}{6c} = 8c^4 \sqrt{6c}$$

b)  $\frac{18w^2}{\sqrt{8w^3}} \cdot \frac{\sqrt{2w}}{\sqrt{2w}} = \frac{18w^2 \sqrt{2w}}{\sqrt{16w^4}} = \frac{9\sqrt{2w}}{2}$