Name:

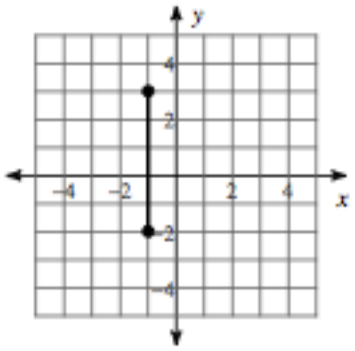
Dividing Complex Numbers (Rationalizing Imaginary Numbers) Qualifier
Simplify.

$\frac{-10-5i}{-6+6i}$	$\frac{1}{-8-5i}$
$\frac{i}{-2-8i}$	$\frac{4}{-3-6i}$
$\frac{-3-7i}{7+10i}$	$\frac{-5-9i}{9+8i}$
$\frac{-4+10i}{3+4i}$	$\frac{-5-3i}{7-10i}$
$\frac{-4-4i}{4i}$	$\frac{-1+i}{-5i}$
$\frac{-6-i}{i}$	$\frac{2+5i}{-i}$
$\frac{-4-4i}{4i}$	$\frac{3}{-i}$

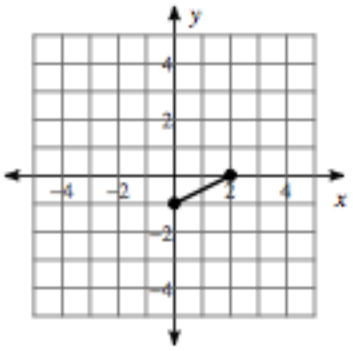
Distance Formula Qualifier Name:

Find the distance between each pair of points.

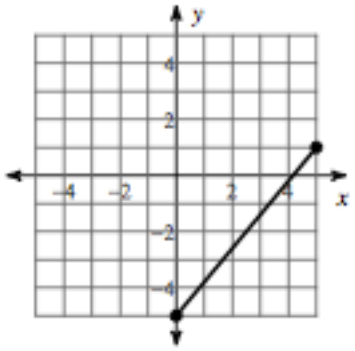
13)



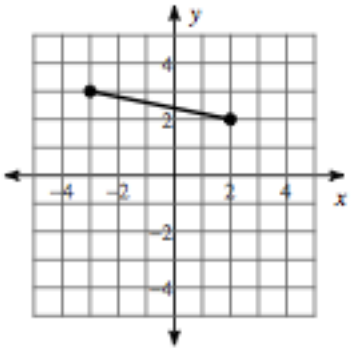
14)



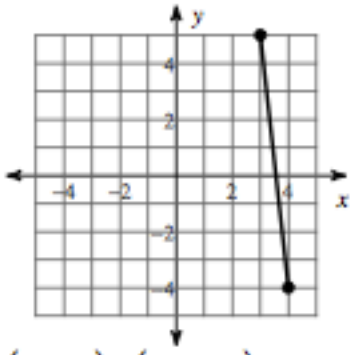
15)



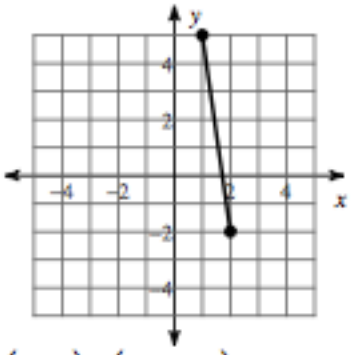
16)



17)



18)



19) (0, –2), (–5, –1)

20) (6, 4), (–5, –1)

21) (3, 8), (9, 10)

22) (10, 1), (9, –4)

23) (–8, 10), (–6, 7)

24) (–5, 6), (8, –4)

Solving Quadratic Equations by Completing the Square Qualifier
Solve each equation by completing the square.

15) $5v^2 - 21 = 10v$

16) $4v^2 + 16v = 65$

17) $7b^2 - 14b - 56 = 0$

18) $2n^2 + 12n + 10 = 0$

19) $n^2 + 13n + 22 = 7$

20) $5n^2 + 19n - 68 = -2$

21) $r^2 - 9r - 38 = -9$

22) $3x^2 + 20x + 36 = 4$

23) $x^2 + 7x - 45 = 7$

24) $n^2 + 19n + 66 = 6$

Problem Task Qualifier

Solve the following quadratic equation by using the quadratic formula.

$$f(x) = 2x^2 - 4x - 6$$

Write the quadratic formula here:

Show work in the space provided:

1. Find the values of h and k. 2. Find the coordinates of the vertex. 3. Find the equation of the AOS. 4. Determine if the function has a maximum or minimum. 5. Evaluate the function at 5 values for x and fill in the table below.

$$\boldsymbol{f(x) = 2x^2 - 4x - 6}$$

h =

k =

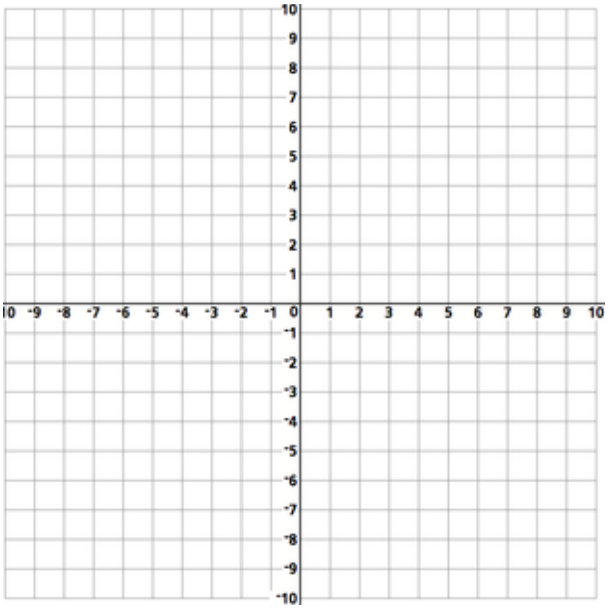
Vertex =

AOS:

maximum or minimum?

x	f(x)

Graph $\boldsymbol{f(x) = 2x^2 - 4x - 6}$ and $\boldsymbol{f(x) = 2x - 6}$



A system of equations is shown below.

$$f(x) = 2x^2 - 4x - 6$$
$$f(x) = 2x - 6$$

1. What are the solutions (points of intersection) of the above system of equations?

2. What is the distance between the points of intersection of the system?