Name: _____

1. Two functions are shown below.

$f(x) = 3x + 7$

$g(x) = 2x + 12$

What is the value of x where the graphs of $f(x)$ and $g(x)$ intersect?

1. −22 2. −5
3. 5 4. 22

2. A system of equations is given below.

$x + 2y = 5$
$2x + y = 4$

Which system of equations does *not* have the same solution?

1. $3x + 6y = 15$
   $2x + y = 4$

2. $4x + 8y = 20$
   $2x + y = 4$

3. $x + 2y = 5$
   $6x + 3y = 12$

4. $x + 2y = 5$
   $4x + 2y = 12$

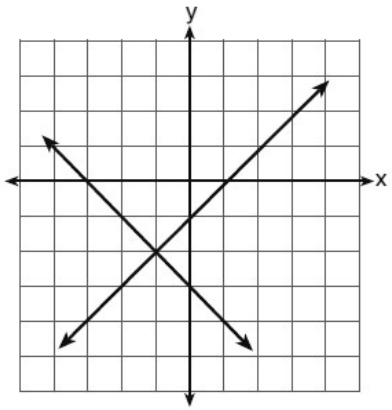
3. The equations $6x + 5y = 300$ and $3x + 7y = 285$ represent the money collected from selling gift baskets in a school fundraising event. If x represents the cost for each snack gift basket and y represents the cost for each chocolate gift basket, what is the cost for each chocolate gift basket?

1. $20 2. $25
3. $30 4. $54

6. At which point will the graphs of the equations $2x + y = 8$ and $x - y = 4$ intersect?

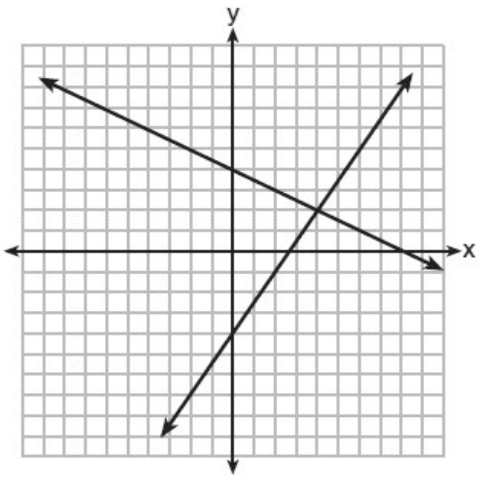
1. (0, 4) 2. (4, 0)
3. (−4, 0) 4. (5, −2)

4. What is the solution of the system of equations shown in the graph below?



1. (1,0) and (–3,0)
2. (0,–3) and (0,–1)
3. (–1,–2)
4. (–2,–1)

5. A system of equations is graphed on the set of axes below.



The solution of this system is

1. (0,4) 2. (2,4)
3. (4,2) 4. (8,0)

7. Solve the following system of equations graphically, and check:

- $x + 2y = 4$
- $y = 2x + 7$

Answer: $x =$ [ ]

and $y =$ [ ].

Answer Key for system of equations

Question 1: 3
Question 2: 4
Question 3: 3
Question 4: 3
Question 5: 3
Question 6: 2
Question 7: -2, 3