Name _____ Date _____

# Systems of Two Linear Equations: Substitution, Elimination and Inspection

**Directions:** Answer each question. Type number answers with digits.

**1.** Solve this system:

$x + y = 12$
$x - y = 4$

What is x?

_____

**2.** Solve this system. Points are written (x, y).

$y = 2x + 1$
$3x + y = 16$

A. (7, 3) B. (2, 5) C. (3, 7) D. (4, 4)

**3.** Solve this system:

$x = 3y - 1$
$2x + y = 26$

What is y?

_____

**4.** Solve this system:

$2x + 3y = 12$
$4x - 3y = 6$

What is y?

_____

**5.** Points are written (x, y). Line A passes through (0, 6) and (6, 0). Line B passes through (0, 0) and (6, 3). At which point do the two lines cross?

A. (3, 3) B. (6, 3) C. (4, 2) D. (2, 4)

**6.** Which systems have exactly one solution? Select the 3 that apply.

☐ A. $y = 5$ and $y = 2x + 1$
☐ B. $y = 4x$ and $y = 2x + 6$
☐ C. $y = 2x + 1$ and $y = -x + 4$
☐ D. $y = 3x - 2$ and $y = 3x + 5$
☐ E. $y = x + 3$ and $2y = 2x + 6$

**7.** Keisha's phone plan charges the same monthly fee every month plus the same cost for each gigabyte (GB) of data. In March she used 3 GB and paid $47. In April she used 7 GB and paid $67. Let f be the monthly fee in dollars and g the cost per GB in dollars. What is the monthly fee, in dollars?

_____ dollars

**8.** Points are written (x, y). Hugo solved this system:

$3x + 2y = 22$
$x + 2y = 10$

His work is shown.

1. $(3x + 2y) - (x + 2y) = 22 - 10$, so $2x = 12$
2. $x = 6$
3. $6 + 2y = 10$, so $2y = 16$
4. $y = 8$, so the solution is (6, 8)

Which step has the first mistake?

A. There is no mistake.

B. $x = 6$

C. $6 + 2y = 10$, so $2y = 16$

D. $y = 8$, so the solution is (6, 8)

E. $(3x + 2y) - (x + 2y) = 22 - 10$, so $2x = 12$