

Algebra
Unit 4 Line Master 4e**Flip, Slide, Turn Answers**

1. a) For example: The value of c is added to or taken away from the value of $3x$.
So, I think the graph will shift up and down.
b) For example: The graph is being translated up and down.
c) For example: The graphs have the same slope, but the y -intercepts are different.
When c is positive, the graph is translated up c units. When c is negative, the graph is translated down c units.
d) $y = 5x - 6$
e) The graph of $y = -7x$ was translated down 3 units.

2. a) For example: The value of c is added to or taken away from the value of x .
So, I think the graph will shift left or right.
b) For example: The graph is being translated left and right.
c) For example: The graphs have the same slope, but the y -intercepts are different.
When c is positive, the graph is translated left. When c is negative, the graph is translated right.
d) For example: No, when $c = 4$, the y -intercept is 12, not 4. This is because c is multiplied by the coefficient, 3; $3 \times 4 = 12$.
e) $y = 5(x + 6)$ or $y = 5x + 30$
f) For example: The graph of $y = -2x$ was translated right 4 units.

3. a) For example: It looks like the lines are mirror images of each other.
I think this relationship will stay the same.
b) For example: The graph of $y = ax$ is being reflected in either the x - or y -axis.
It looks like either reflection would have the same result.
c) For example: The graphs have the same y -intercept, but the slopes have the same numbers but opposite signs.
d) $y = 10x$
e) For example: The graph of $y = 2x + 3$ could have been reflected in the y -axis or it could have been reflected in the line $y = 3$.

Algebra
Unit 4 Line Master 4f**Flip, Slide, Turn Answers (cont'd)**

4. a) For example: It looks like the lines are perpendicular.
I think this relationship will stay the same.
- b) For example: The graph of $y = ax$ is being rotated 90° clockwise or 90° counterclockwise about its y -intercept, 0.
- c) For example: The graphs have the same y -intercept, but the slope of the new graph is the negative reciprocal of the slope of the graph of $y = ax$.
- d) For example: Yes, the graph of $y = ax + 2$ is rotated 90° clockwise or 90° counterclockwise about its y -intercept, which is now 2.
- e) $y = \frac{1}{5}x$
- f) For example: The graph of $y = 6x$ could have been rotated 90° clockwise about the origin.