**LESSON 1-3**
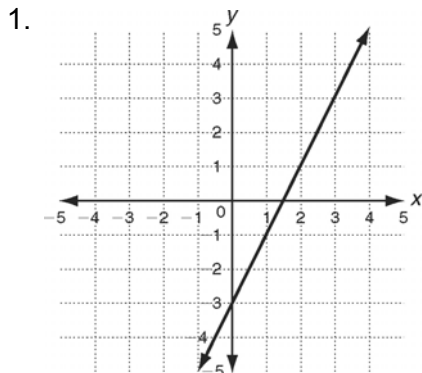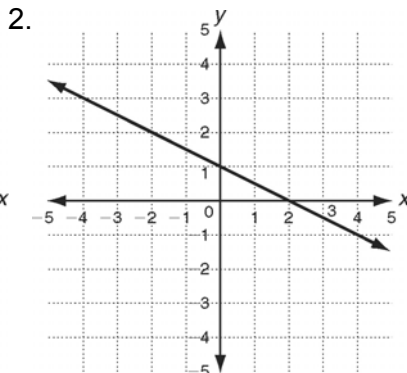
# Practice B

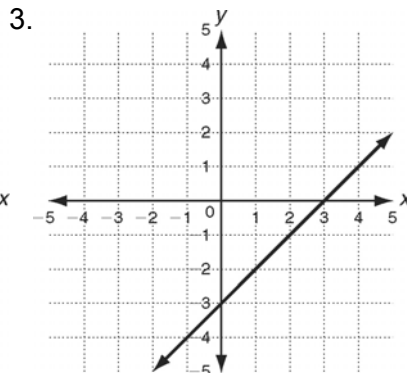## Transforming Linear Functions

**Let g(x) be the indicated transformation of f(x). Write the rule for g(x).**

1.



horizontal translation
left 3 units

_____

2.



vertical compression by
a factor of $\frac{1}{5}$

_____

3.



reflection across the
y-axis

_____

4. linear function defined by the table; horizontal stretch by a factor of 2.3

| x | −5 | 0 | 7 |
|---|----|---|----|
| y | −3 | 7 | 21 |

_____

5. f(x) = 1.7x − 3; vertical compression by a factor of 0.7          _____

**Let g(x) be the indicated combined transformation of f(x) = x. Write the rule for g(x).**

6. vertical translation down 2 units followed by a

 horizontal compression by a factor of $\frac{2}{5}$          _____

7. horizontal stretch by a factor of 3.2 followed by
 a horizontal translation right 3 units          _____

**Solve.**

8. The Red Cab Taxi Service used to charge $1.00 for the first $\frac{1}{5}$ mile and $0.75 for each

 additional $\frac{1}{5}$ mile. The company just raised its rates by a factor of 1.5.

 a. Write a new price function g(x) for a taxi ride.

 _____

 b. Describe the transformation(s) that have been applied.

 _____