

Practice 2-6

Vertical and Horizontal Translations

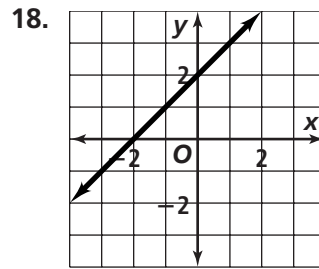
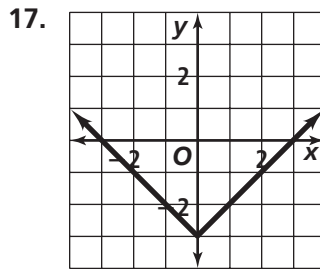
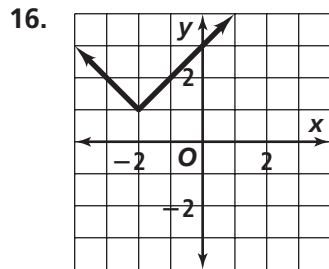
Describe each translation of $f(x) = |x|$ as vertical, horizontal, or diagonal. Then graph each translation.

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|-------------------------------|--|--|
| 1. $f(x) = x + 2 $ | 2. $f(x) = x + 4 $ | 3. $f(x) = x - 5$ |
| 4. $f(x) = x + 1 - 1$ | 5. $f(x) = x - 2 + 1$ | 6. $f(x) = \left x - \frac{3}{2}\right $ |
| 7. $f(x) = x - \frac{1}{3}$ | 8. $f(x) = \left x - \frac{5}{2}\right $ | 9. $f(x) = \left x + \frac{1}{2}\right + \frac{3}{2}$ |

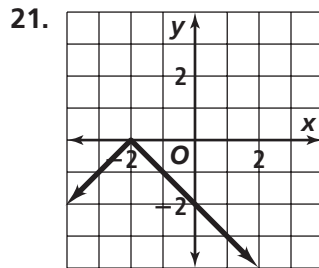
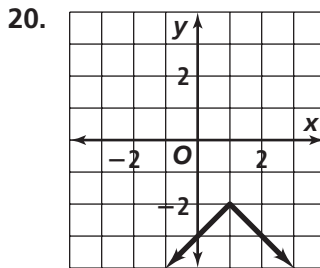
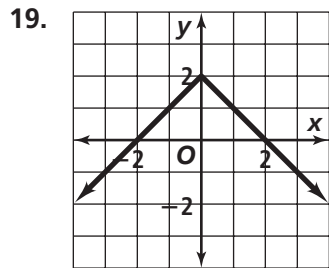
Write an equation for each translation.

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|--|---|
| 10. $y = x $, 1 unit up, 2 units left | 11. $y = x $, 4 units right |
| 12. $y = - x $, 3 units up, 1 unit right | 13. $y = - x $, $\frac{3}{2}$ units down, $\frac{1}{2}$ unit right |
| 14. $y = x $, 2 units down, 3 units left | 15. $y = - x $, $\frac{3}{5}$ unit up |

Write the equation of each translation of $y = x$ or $y = |x|$.



Each graph shows a translation of $y = -|x|$. State the values of h and k .



Graph each equation.

- | | | |
|-----------------------|---|------------------------|
| 22. $y = x - 1 + 2$ | 23. $y = -\left x + \frac{1}{2}\right $ | 24. $y = - x + 3 - 1$ |
| 25. $y = -x - 1 $ | 26. $y = - x - 2 + 4$ | 27. $y = x + 2 - 1$ |