

Practice 2-6

Families of Functions

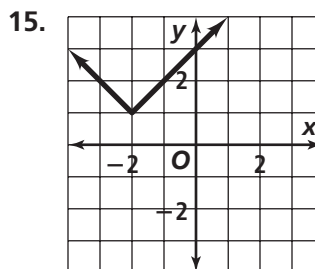
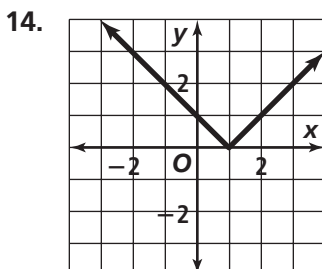
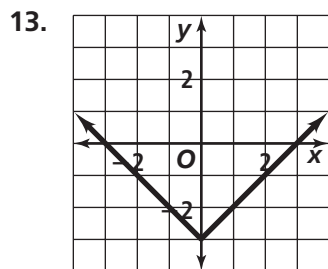
Describe each translation of $f(x) = |x|$ as vertical, horizontal, or combined. Then graph each translation.

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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 $ |

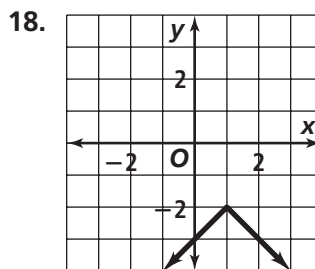
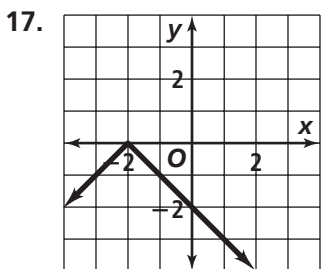
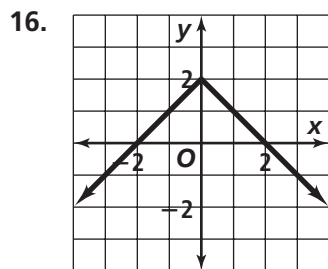
Write an equation for each translation.

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| 7. $y = x $, 1 unit up, 2 units left | 8. $y = x $, 4 units right |
| 9. $y = - x $, 3 units up, 1 unit right | 10. $y = - x $, $\frac{3}{2}$ units down, $\frac{1}{2}$ unit right |
| 11. $y = x $, 2 units down, 3 units left | 12. $y = - x $, $\frac{3}{5}$ unit up |

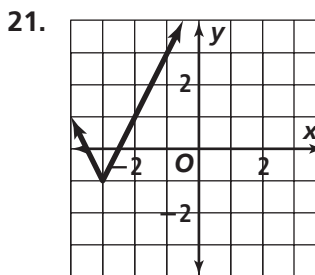
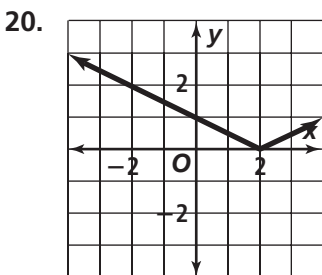
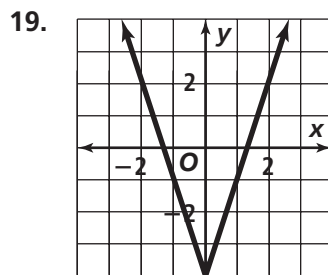
Write the equation of each translation of $y = |x|$.



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



Write the equation for each graph.



Graph each equation.

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|----------------|--------------------|------------------------------|
| 22. $y = 3 x $ | 23. $y = 2 x - 3$ | 24. $y = \frac{1}{2} x - 1 $ |
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