

Match the function with its graph below.

1) $f(x) = |x + 3|$ **B**

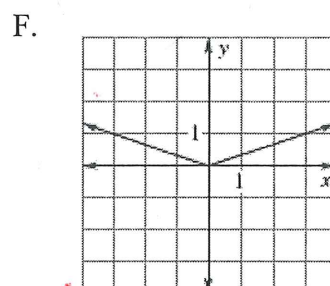
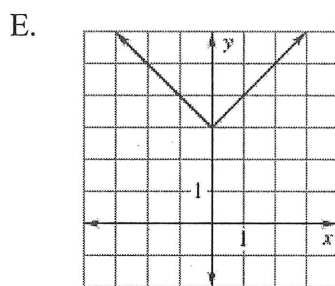
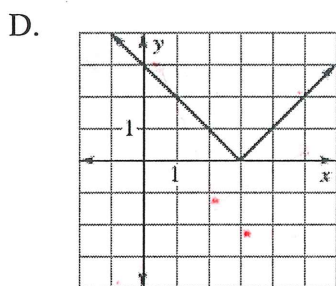
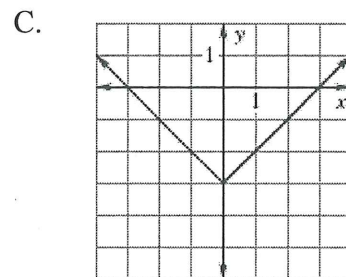
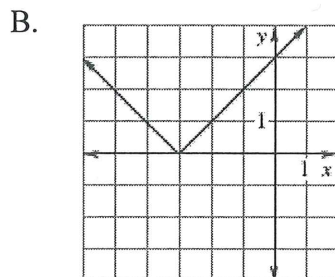
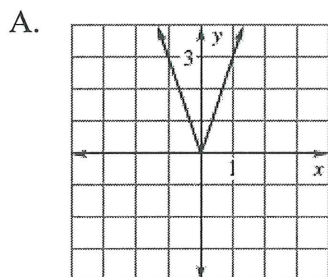
2) $f(x) = |x - 3|$ **D**

3) $f(x) = |x| - 3$ **C**

4) $f(x) = |x| + 3$ **E**

5) $f(x) = 3|x|$ **A**

6) $f(x) = \frac{1}{3}|x|$ **F**



For each function, describe the transformations. Then graph it on a separate piece of paper.

7) $f(x) = -2|x|$

8) $g(x) = |x + 1| + 4$

Reflect, stretch by
factor of 2

Translate 1 left,
4 up

9) $h(x) = 5|x - 2| - 4$

stretch by factor of 5,
Translate 2 right, 4 down

10) $k(x) = \frac{1}{2}|x - 5| + 2$

Compress by factor of $\frac{1}{2}$,
Translate 5 right and 2 up

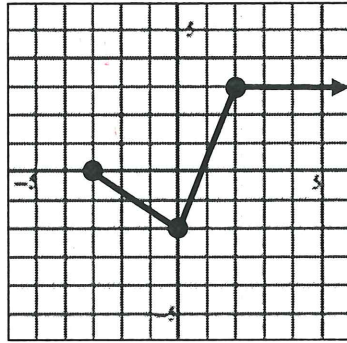
11) $m(x) = -\frac{3}{2}|x + 3|$

Reflect, stretch by factor
of $\frac{3}{2}$, translate 3 left

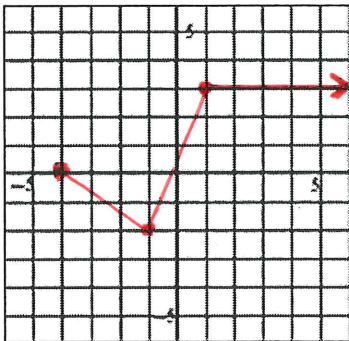
12) $s(x) = |x| - 6$

Translate 6 down

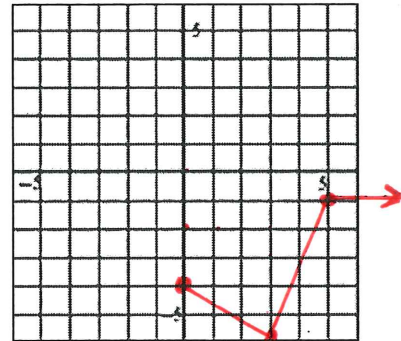
Using the given graph of $f(x)$, sketch a graph of each of the following transformed functions.



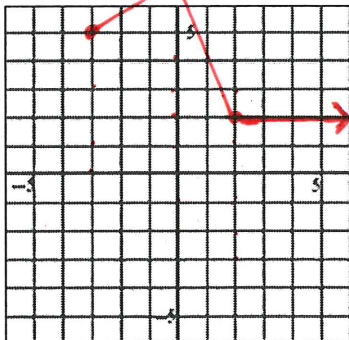
13) $y = f(x + 1)$



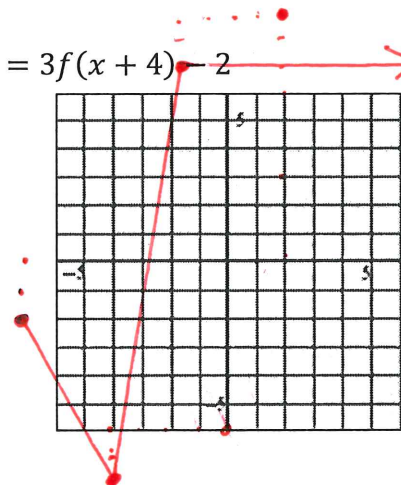
14) $y = f(x - 3) - 4$



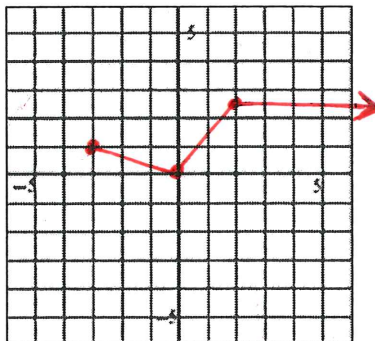
15) $y = -f(x) + 5$



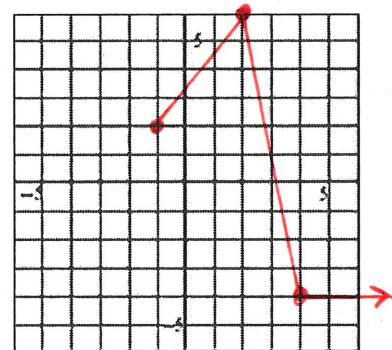
16) $y = 3f(x + 4) - 2$



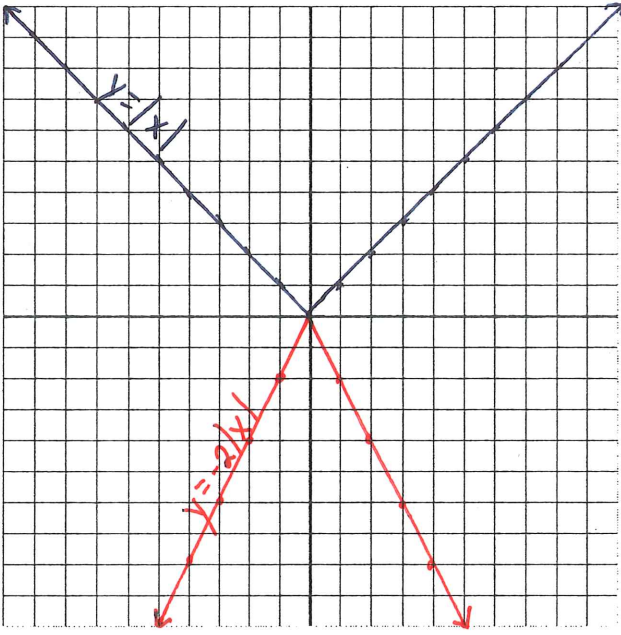
17) $y = \frac{1}{2}f(x) + 1$



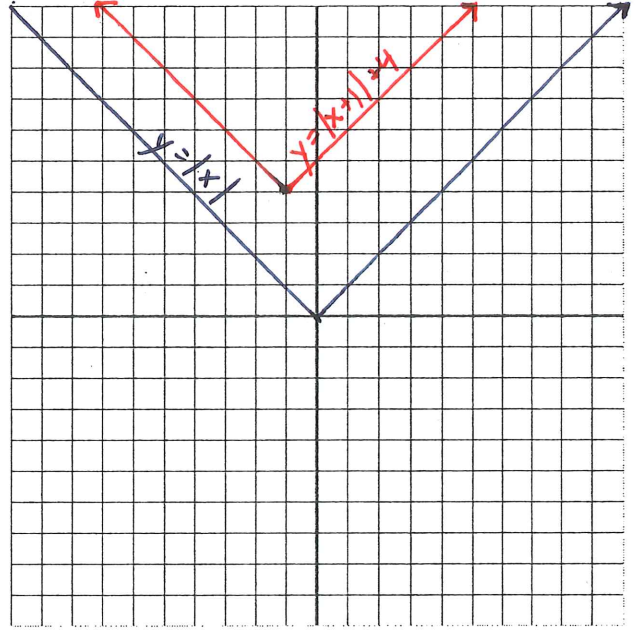
18) $y = -2f(x - 2) + 2$



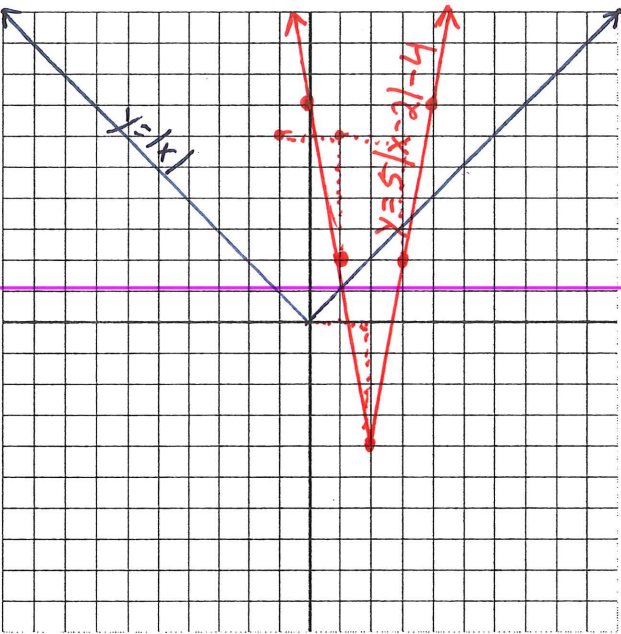
7.



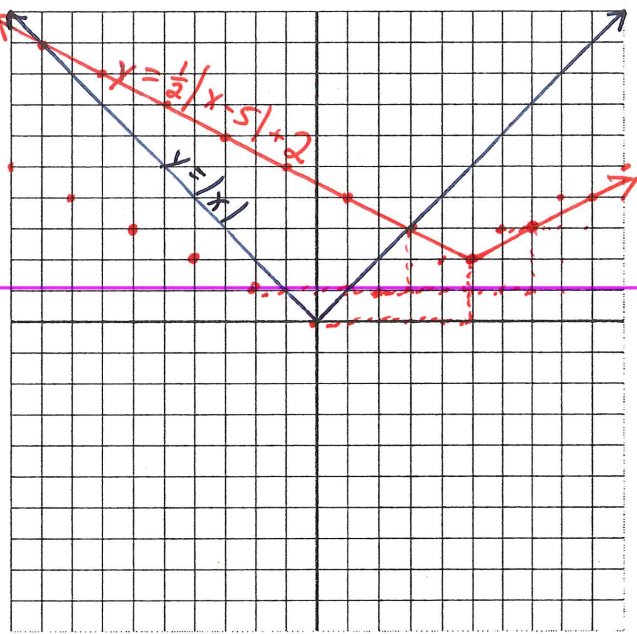
8.



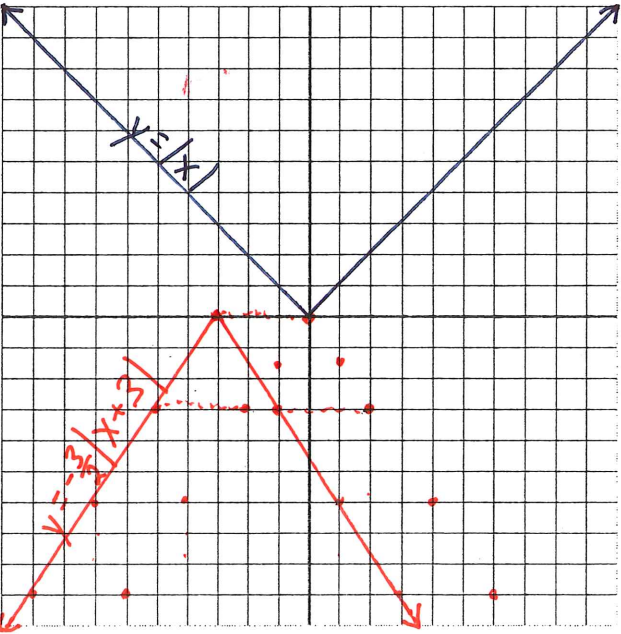
9.



10.



11.



12.

