

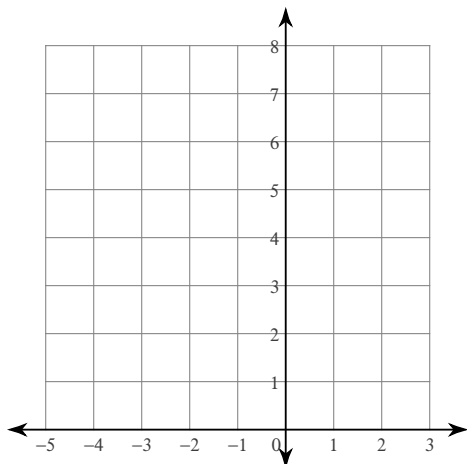
Test review unit 1

Due _____

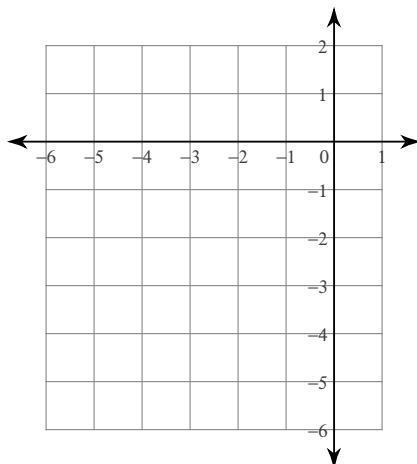
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Sketch the graph of each function and state the domain and range

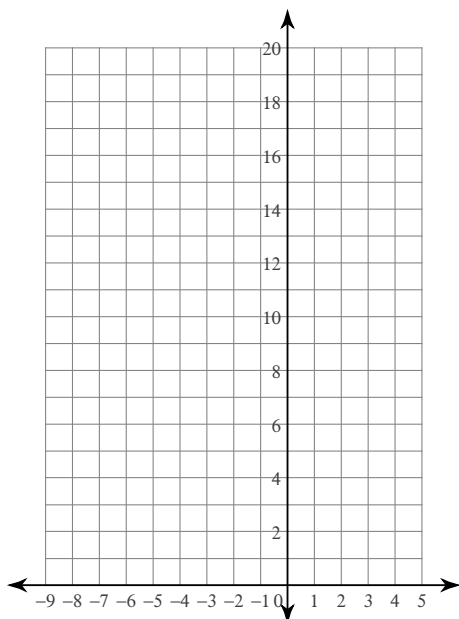
1) $f(x) = (x + 1)^2 + 3$



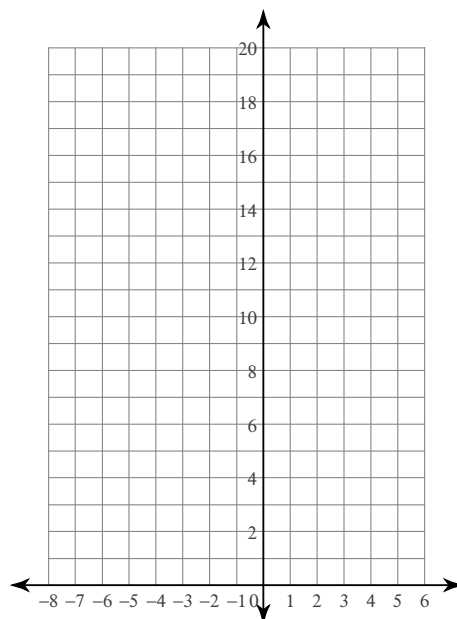
2) $f(x) = (x + 4)^2 - 4$



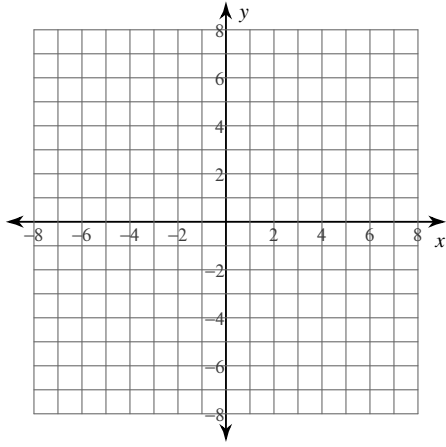
3) $f(x) = 2^{x+2}$



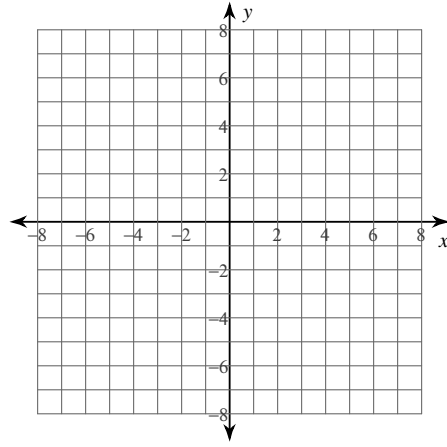
4) $f(x) = 2^{x+1} + 2$



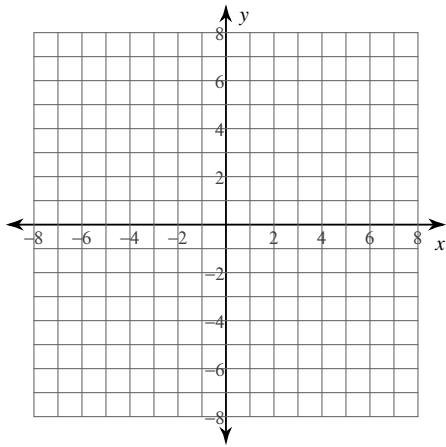
$$5) y = \sqrt{x+5} - 4$$



$$6) y = \sqrt{x+6}$$

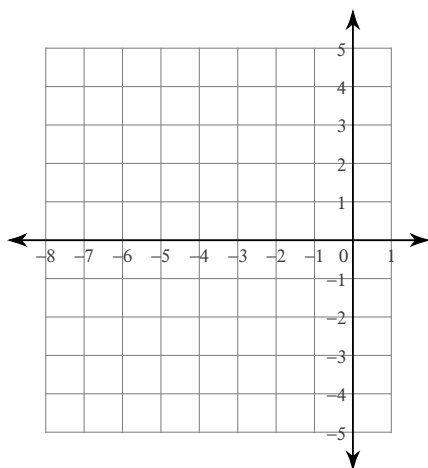


$$7) y = 2 + \sqrt{x-2}$$

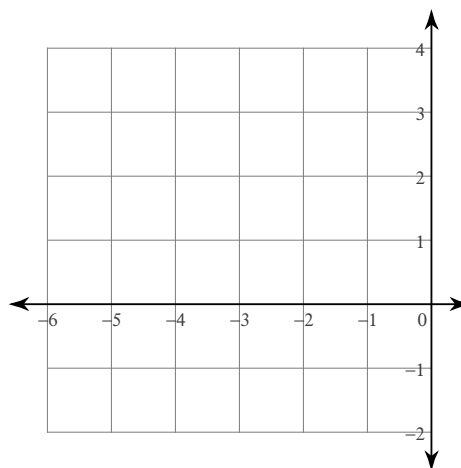


Sketch the graph of each reflection and expansion function.

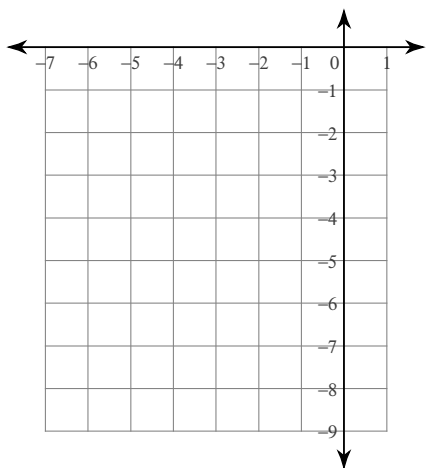
8) $f(x) = 2(x + 4)^2 - 4$



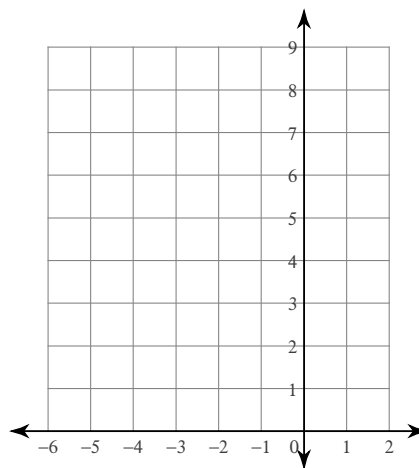
9) $f(x) = -(x + 3)^2 + 3$



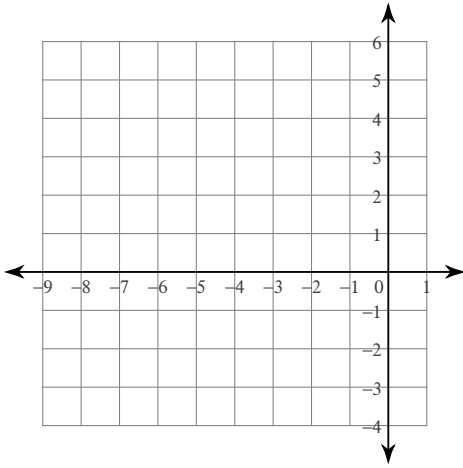
10) $f(x) = -(x + 3)^2 - 4$



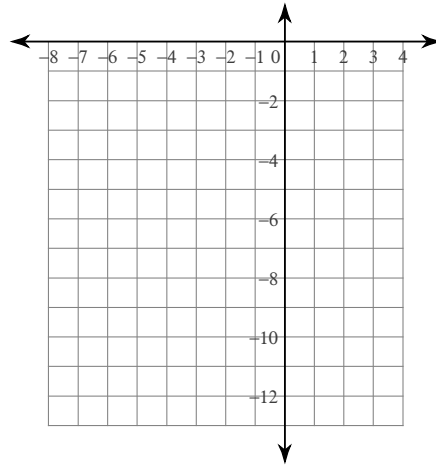
11) $f(x) = (x + 2)^2 + 4$



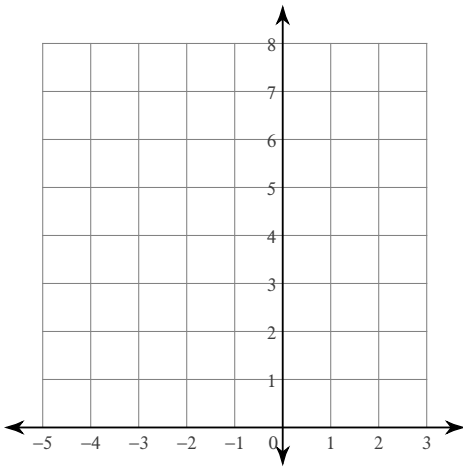
12) $f(x) = 2(x + 3)^2 - 3$



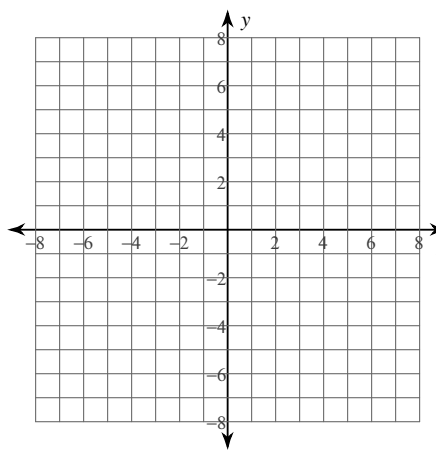
13) $f(x) = -2(x + 2)^2 - 4$



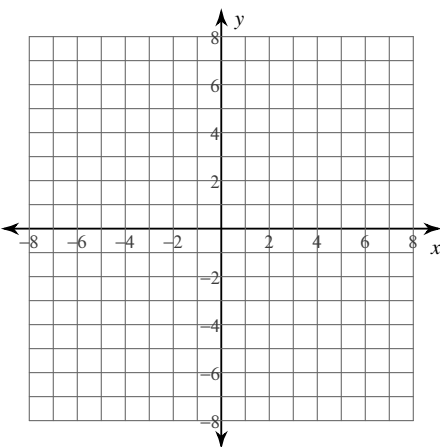
14) $f(x) = (x + 2)^2 + 3$



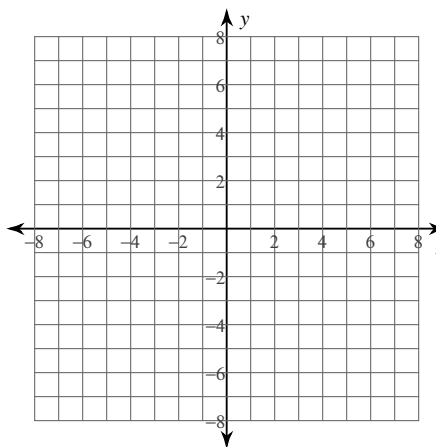
15) $y = 3\sqrt{x}$



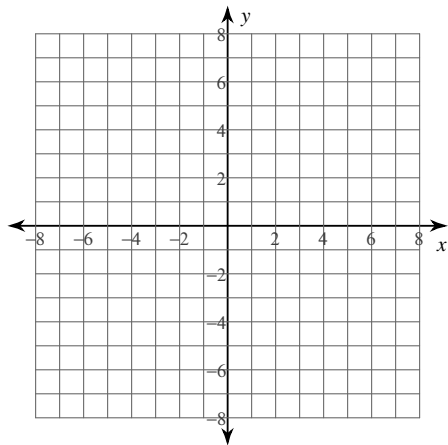
16) $y = 2\sqrt{x + 5}$



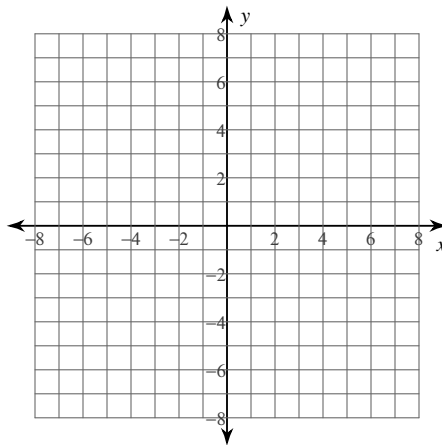
17) $y = -2\sqrt{x - 2} - 1$



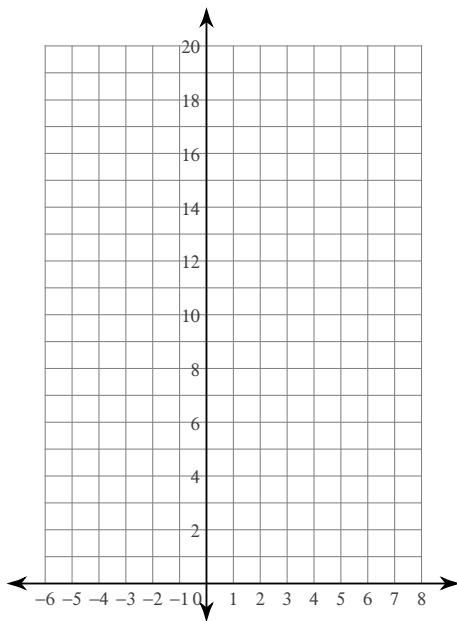
$$18) y = -3\sqrt{x+6} + 5$$



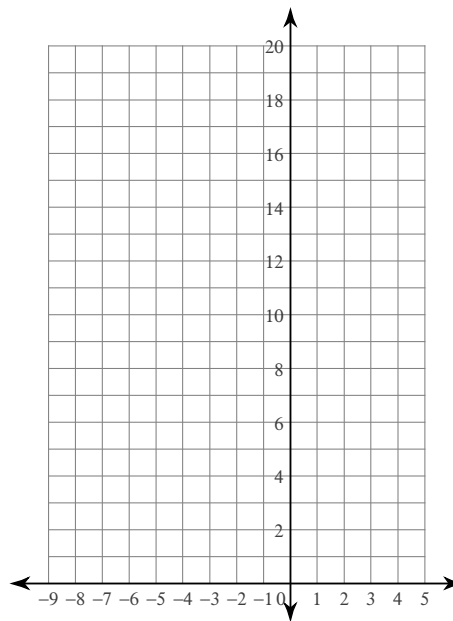
$$19) y = 2\sqrt{x+2} - 5$$



$$20) f(x) = 2 \cdot 3^{x-1} + 2$$

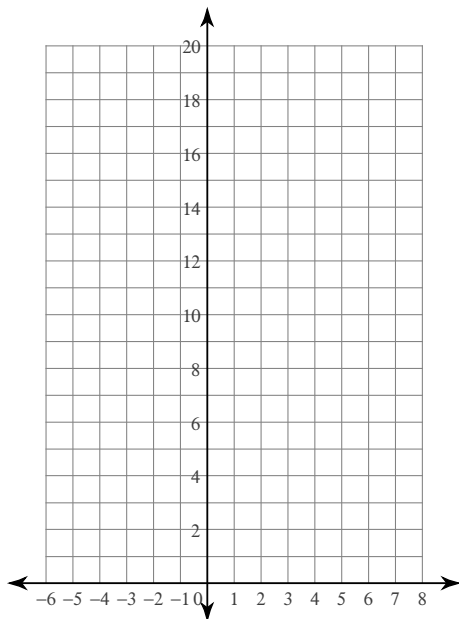


$$21) f(x) = 3 \cdot 2^{x+2} + 2$$

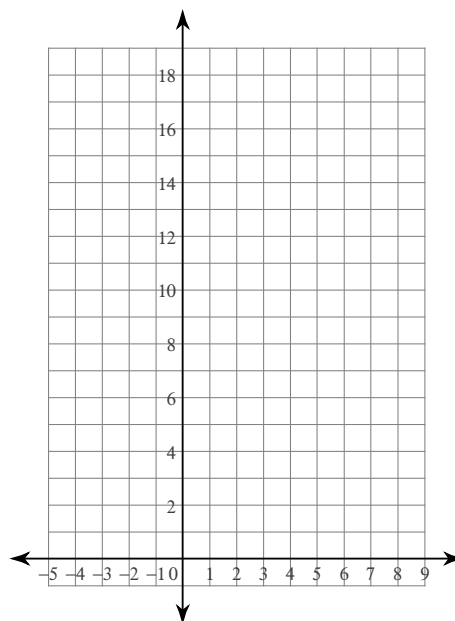


Sketch the graph of each function and state the domain and range.

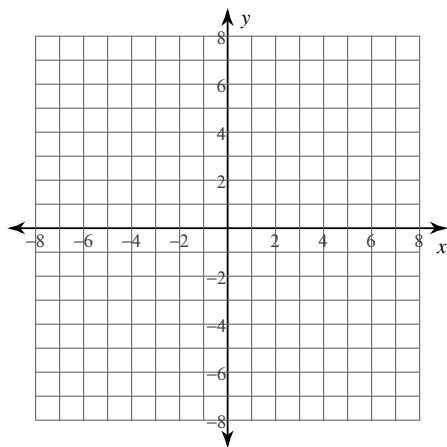
$$22) f(x) = \frac{1}{3} \cdot \left(\frac{1}{2}\right)^{x-1} + 1$$



$$23) f(x) = 3 \cdot 2^{x-2} - 1$$

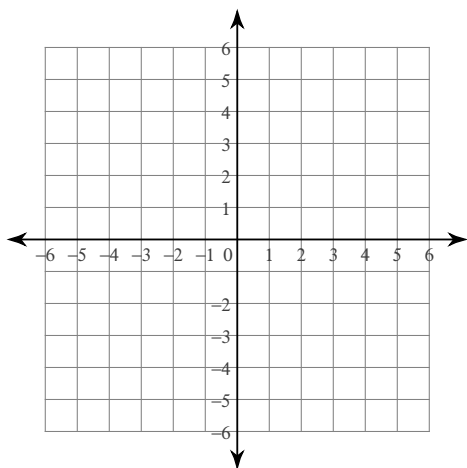


$$24) y = -\frac{3}{4}\sqrt{x+4} + 1$$



Sketch the graph of each function and state the domain and range

25) $y = x + 5$



If the point $(-3, 2)$ is on the graph of the original function $y=f(x)$, determine the new coordinates of the translated functions listed below.

26) $y = f(x+3)-5$

27) $y = -f(x+4)-6$

28) $y = f(-x-2)+3$

29) $y = -f(-x-1)+2$

30) $y = 5+ -f(2x+6)$

31) $y+5 = f(x-2)$

Find the inverse of each function.

32) $h(x) = -3 + (x - 2)^3$

33) $h(x) = -\frac{2}{x} - 1$

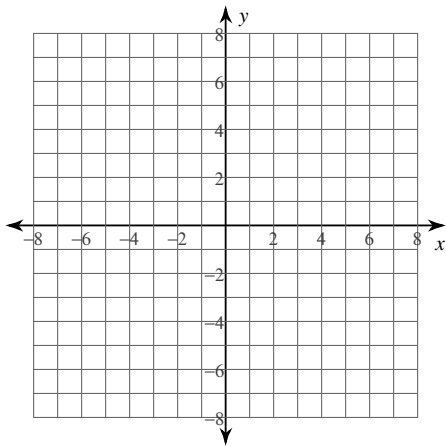
34) $h(x) = \sqrt[3]{-x + 2}$

35) $f(x) = \sqrt[3]{x} - 3$

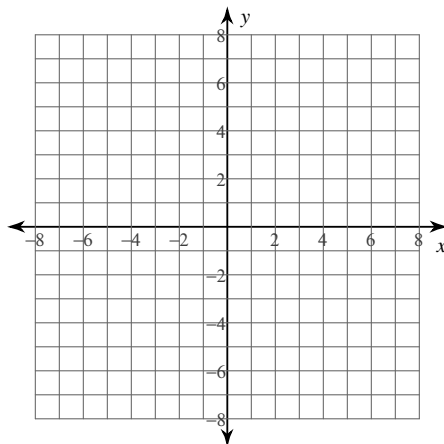
$$36) h(n) = \frac{4}{n-1}$$

Sketch the graph of each function and state the domain and range.

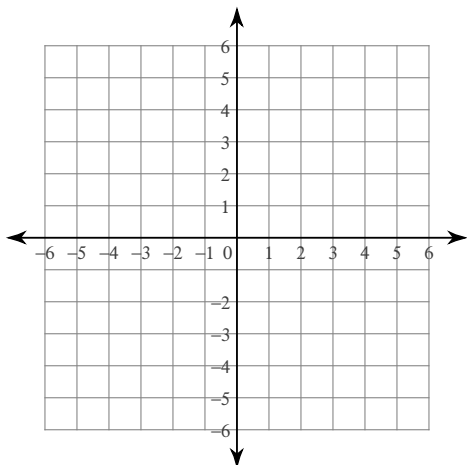
$$37) f(x) = -\frac{2}{3}(x-3)^2 - 5$$



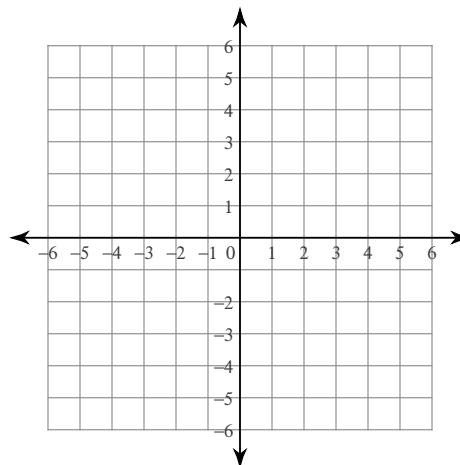
$$38) f(x) = (x-6)^2 - 6$$



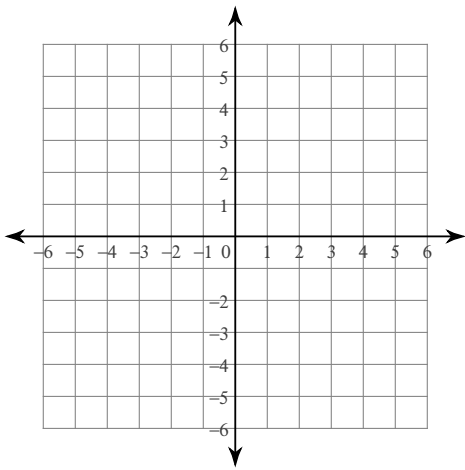
$$39) y = -|x| + 4$$



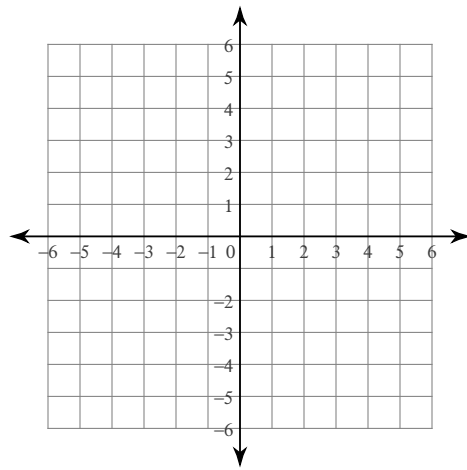
$$40) y = -|x+4|$$



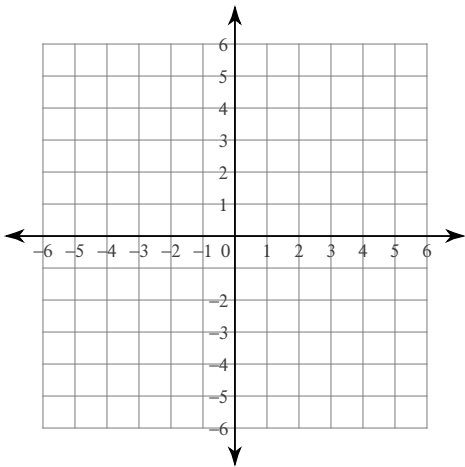
$$41) y = |x + 4|$$



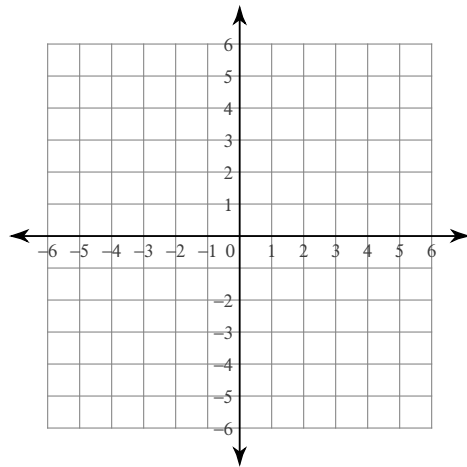
$$42) y = |x + 3| - 2$$



$$43) y = |x + 3| + 4$$

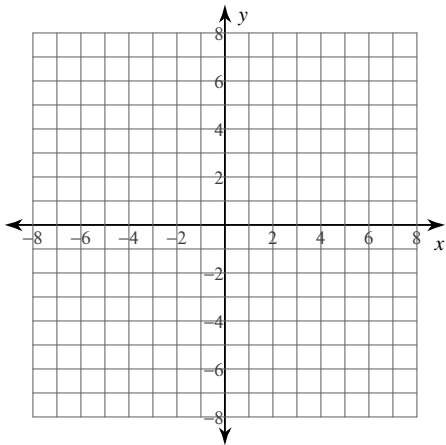


$$44) y = -|x + 4| + 2$$

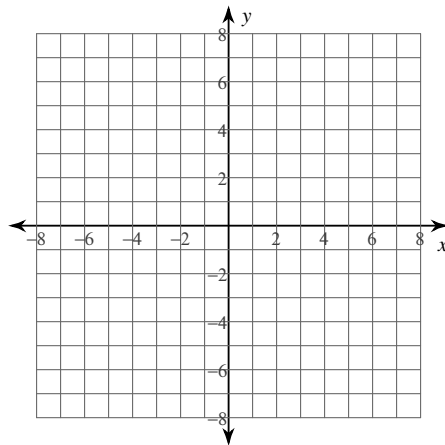


graph the reciprocal

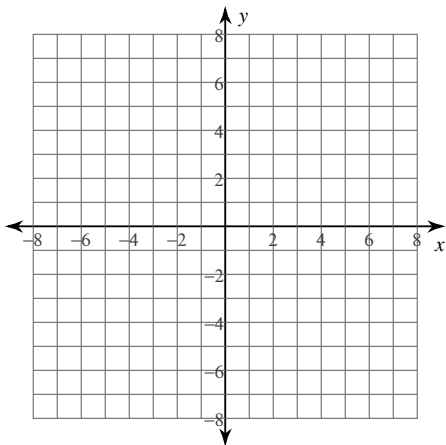
45) $y = x^2 + 4$



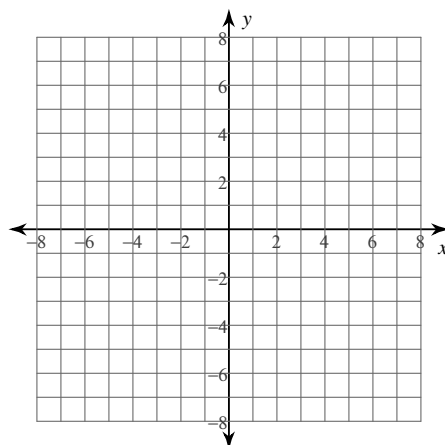
46) $y = -(x - 6)^2 - 1$



47) $y = -(x - 1)^2 + 2$

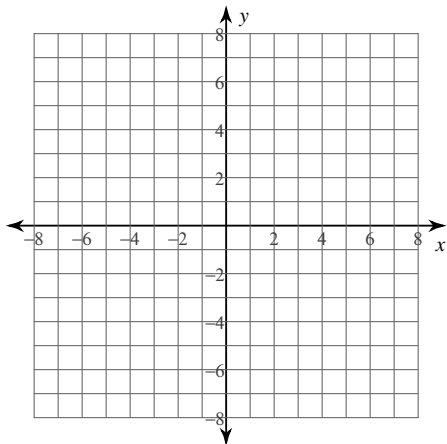


48) $y = \frac{1}{3}(x + 3)^2 + 2$



Graph each function.

$$49) f(x) = \frac{x - 3}{3x^2 - 15x + 18}$$



$$50) f(x) = \frac{3x + 3}{x - 1}$$

