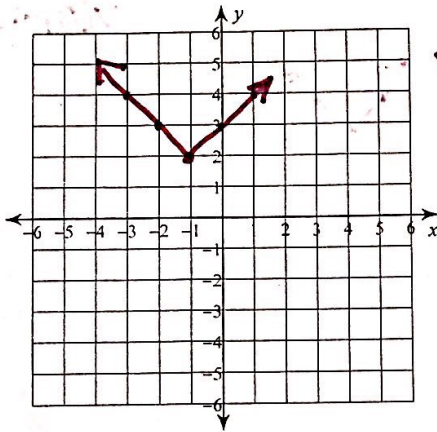


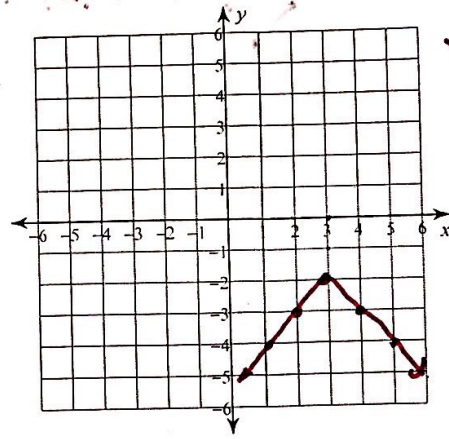
Graph each equation.

1) $y = |x + 1| + 2$



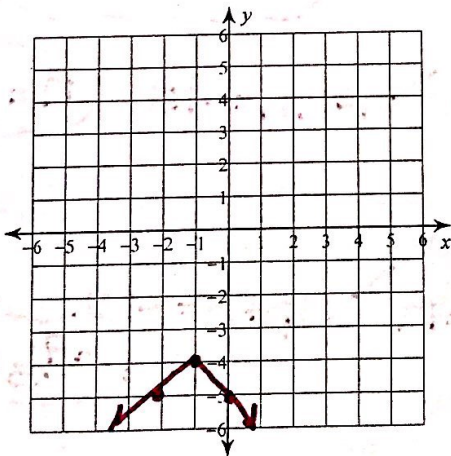
Vertex
(-1, 2)

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



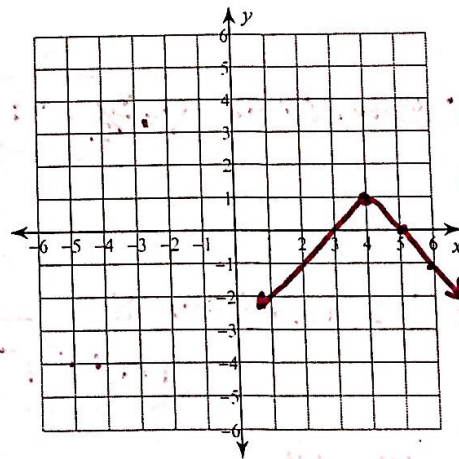
V(3, -2)

3) $y = -|x + 1| - 4$



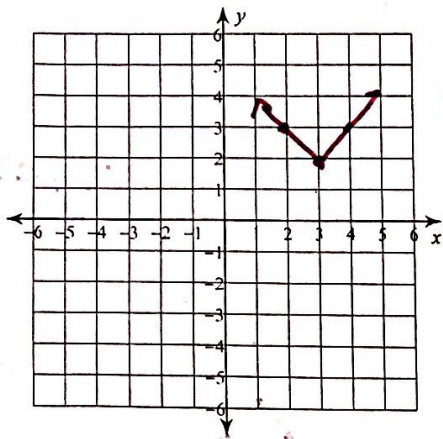
Vertex
(-1, -4)

4) $y = -|x - 4| + 1$



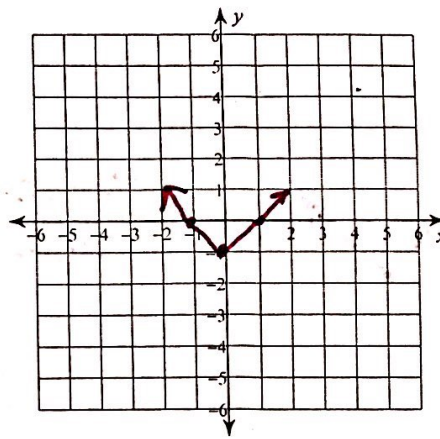
Vertex
(4, 1)

$$5) y = |x - 3| + 2$$



$V(3, 2)$

$$6) y = |x| - 1$$



$V(0, -1)$

Solve each equation.

$$7) |-4m| = 16$$

$$\begin{aligned} -4m &= 16 & -4m &= -16 \\ m &= -4 & m &= 4 \end{aligned}$$

$$9) |x + 3| = 4$$

$$\begin{aligned} x + 3 &= 4 & x + 3 &= -4 \\ x &= 1 & x &= -7 \end{aligned}$$

$$11) |5 + 4v| = 11$$

$$\begin{aligned} 5 + 4v &= 11 & 5 + 4v &= -11 \\ v &= \frac{3}{2} & v &= -4 \end{aligned}$$

$$13) |10m + 8| = 108$$

$$\begin{aligned} 10m + 8 &= 108 & 10m + 8 &= -108 \\ m &= 10 & m &= -\frac{58}{5} \end{aligned}$$

$$15) -9|-4v| - 4 = -76$$

$$\begin{aligned} -9|-4v| &= -72 \\ |-4v| &= 8 \\ -4v &= 8 & -4v &= -8 \\ v &= -2 & v &= 2 \end{aligned}$$

$$17) -2 - 9\left|\frac{x}{9}\right| = -8$$

$$x = 6, -6$$

$$8) |10 + x| = 19$$

$$\begin{aligned} 10 + x &= 19 & 10 + x &= -19 \\ x &= 9 & x &= -29 \end{aligned}$$

$$10) \left|\frac{n}{6}\right| = 4$$

$$\begin{aligned} \frac{n}{6} &= 4 & \frac{n}{6} &= -4 \\ n &= 24 & n &= -24 \end{aligned}$$

$$12) |1 - 7n| = 15$$

$$\begin{aligned} 1 - 7n &= 15 & 1 - 7n &= -15 \\ n &= -2 & n &= \frac{16}{7} \end{aligned}$$

$$14) |5p + 3| = 12$$

$$\begin{aligned} 5p + 3 &= 12 & 5p + 3 &= -12 \\ p &= \frac{9}{5} & p &= -3 \end{aligned}$$

$$16) 8 + 10\left|\frac{n}{6}\right| = 18$$

$$\begin{aligned} 10\left|\frac{n}{6}\right| &= 10 \\ \left|\frac{n}{6}\right| &= 1 \\ \frac{n}{6} &= 1 & \frac{n}{6} &= -1 \\ n &= 6 & n &= -6 \end{aligned}$$

$$18) 2 - 5|a - 4| = -28$$

$$a = 10, -2$$