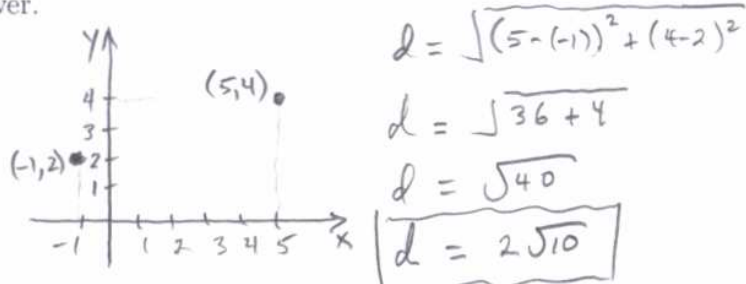
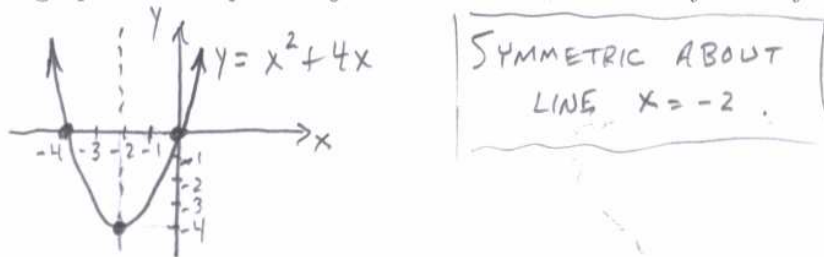


SHOW YOUR WORK FOR FULL CREDIT.

1. Plot the points  $(-1, 2)$  and  $(5, 4)$ . Also, find the distance between these points and simplify your answer.



2. Sketch the graph of the equation  $y = x^2 + 4x$ . Describe the symmetry of this graph.



3. Write the slope-intercept form of the equation of the line through the point  $(2, 1)$  and perpendicular to the line  $4x - 2y = 3$ .

$$\left. \begin{aligned} -2y &= -4x + 3 \\ y &= 2x - \frac{3}{2} \end{aligned} \right\} \begin{aligned} (2, 1), m &= -\frac{1}{2} \\ y - 1 &= -\frac{1}{2}(x - 2) \\ y - 1 &= -\frac{1}{2}x + 1 \end{aligned} \right\} \boxed{y = -\frac{1}{2}x + 2}$$

4. Let  $f(x) = x^3 - 9x$ . Find all real values of  $x$  such that  $f(x) = 0$ .

$$\left. \begin{aligned} x^3 - 9x &= 0 \\ x(x^2 - 9) &= 0 \\ x(x - 3)(x + 3) &= 0 \end{aligned} \right\} \boxed{x = 0, x = 3, x = -3}$$

5. Write the area  $A$  of a square as a function of its perimeter  $P$ .

$$\left. \begin{aligned} P &= 4x \\ \frac{P}{4} &= x \end{aligned} \right\} \begin{aligned} A &= x^2 \\ A &= \left(\frac{P}{4}\right)^2 \end{aligned} \right\} \boxed{A = \frac{P^2}{16}}$$