College Algebra: Quiz #6 (Solutions)

1. Find the distance between the points $(1, -1)$ and $(5, -2)$.

   Solution: Remember that the formula for the distance between (x_1, y_1) and (x_2, y_2) is

   $$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}.$$

   Here we have $(x_1, y_1) = (1, -1)$ and $(x_2, y_2) = (5, -2)$, so that the formula gives

   $$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} = \sqrt{((5) - (1))^2 + ((-2) - (-1))^2} = \sqrt{(4)^2 + (-1)^2} = \sqrt{17}.$$

   So the distance between these points is $\boxed{\sqrt{17}}$.