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## Notes on Distance Formula

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The **Distance Formula** allows you to find the distance between two points. The subscripts  $(x_1, y_1)$  only indicate that there is a first and second point. However, whichever point is first or second is up to you.

$$\text{Distance Formula: } d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

1. Find the distance between  $(1, -2)$  and  $(-3, 6)$ .
2. Find the distance between  $(-2, -3)$  &  $(-4, 4)$ .

3. Use the distance formula to find the value of  $x$  if the distance between  $(1, 2)$  and  $(x, 5)$  is 5 units.

4. Use the distance formula to find the value of  $y$  if the distance between  $(-1, 4)$  &  $(5, y)$  is 10 units.