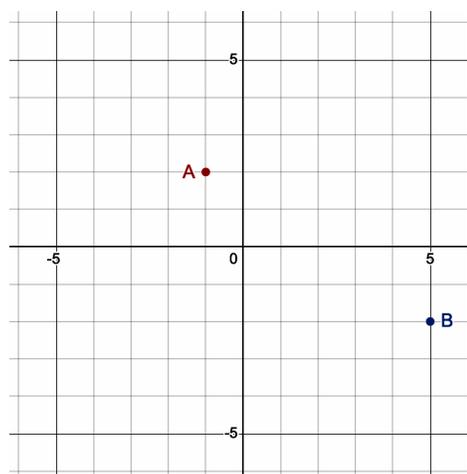


Length of a Line Segment

Recall:

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

1. A line segment connects points $A(-1, 2)$ and $B(5, -2)$.
 - a) Estimate the length by sketching the right triangle formed by the horizontal and vertical changes.
 - b) Calculate the exact length using the formula.
 - c) Calculate the approximate length accurate to one decimal place.



2. Calculate the length of the line segment with endpoints $C(-7, 4)$ and $D(2, 16)$.

3. A drone flies in a straight line from point $P (1.8, -3.4)$ to point $Q (-4.2, 2.6)$ on a coordinate grid (units are kilometres).
- Determine the distance travelled (exact value under a square root is fine).
 - Give the real-world distance travelled to the nearest tenth of a kilometre.