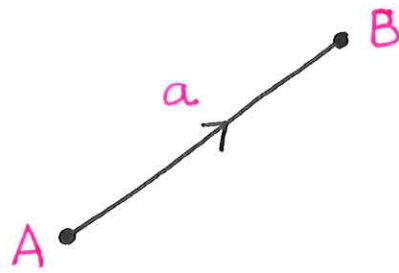


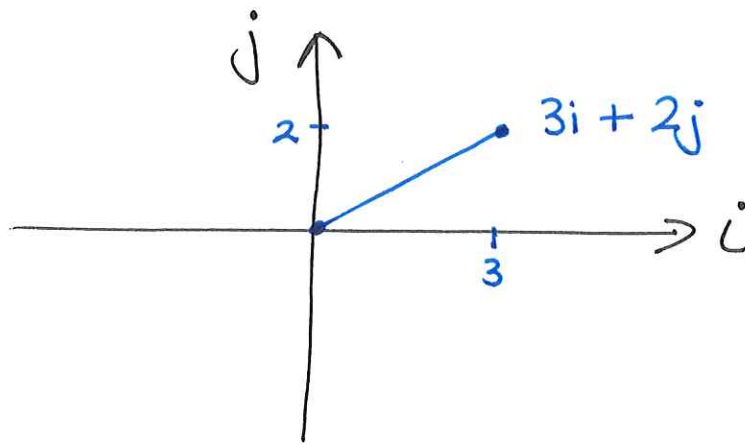
- Labels



$$\vec{AB} = a$$

$$\vec{BA} = -a$$

- i and j components



- Parallel

$$2i + 4j$$

$$\text{gradient} = \frac{4}{2} = 2$$

$$6i + 12j$$

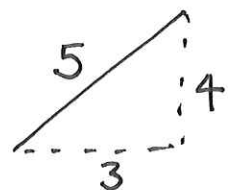
$$\text{gradient} = \frac{12}{6} = 2$$

gradients are the same $\therefore$ parallel

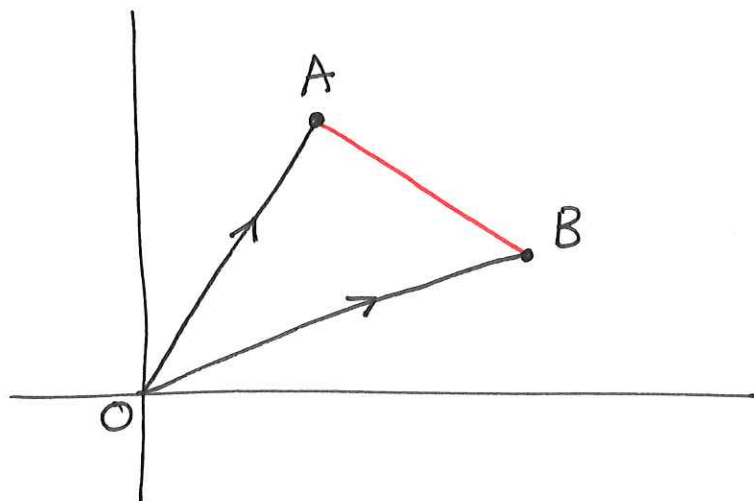
- magnitude/length

$$a = 3i + 4j$$

$$|a| = \sqrt{3^2 + 4^2} = 5$$



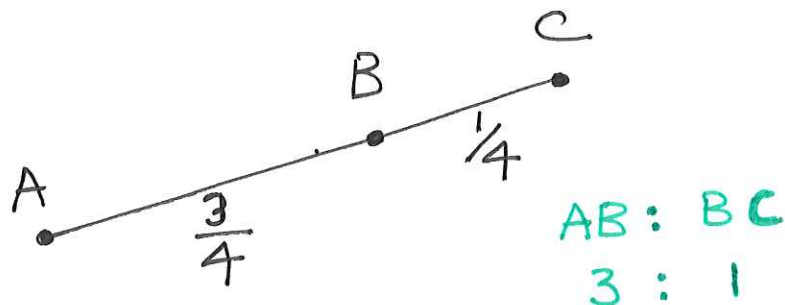
- POSITION VECTORS



$$\vec{AB} = \vec{AO} + \vec{OB}$$

NOTE $\vec{AO} = -\vec{OA}$

- RATIOS



- VELOCITY + JOURNEYS

$$\text{current position} = \text{velocity} \times \text{time} + \text{starting position}$$