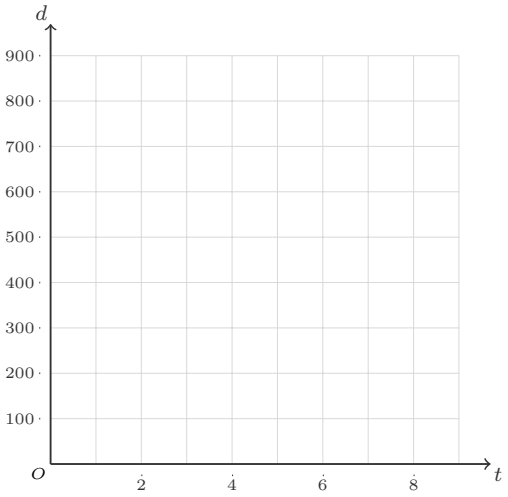
1 A track PQ is 800 m long. Betty leaves P towards Q at 100 m/min. At the same moment Jacky leaves Q towards P at 60 m/min. **Draw both graphs on the grid and label them.**

t is the time in minutes and d is the distance from P in metres.



(a) Betty's graph (2)

(b) Jacky's graph (2)

(c) When and where do they meet? (2)

(d) **Check your answer by calculating, not by reading.** (2)

(8 marks)

2 Two tanks are being filled. Their graphs cross at $(6, 30)$. Tank A's graph is steeper than tank B's.

t is the time in minutes and V is the volume in litres.

(a) **What does the crossing tell you?** (2)

(b) Which tank is filling faster? (1)

(c) Which tank holds more after 10 minutes? (1)

(d) **Which tank held more after 2 minutes? Explain.** (2)

(6 marks)

3 Two graphs are drawn on one grid and they do not cross anywhere on it.

(a) **Give one reason why two straight-line graphs might never cross.** (2)

(b) **Give a different reason why two graphs might not cross on the grid you were given.** (2)

(4 marks)