

HOME EXERCISE 7

Set out carefully all appropriate working.

Do **not** use a calculator in questions 1, 2, 3 or 4.

Use a calculator in questions 5 and 6.

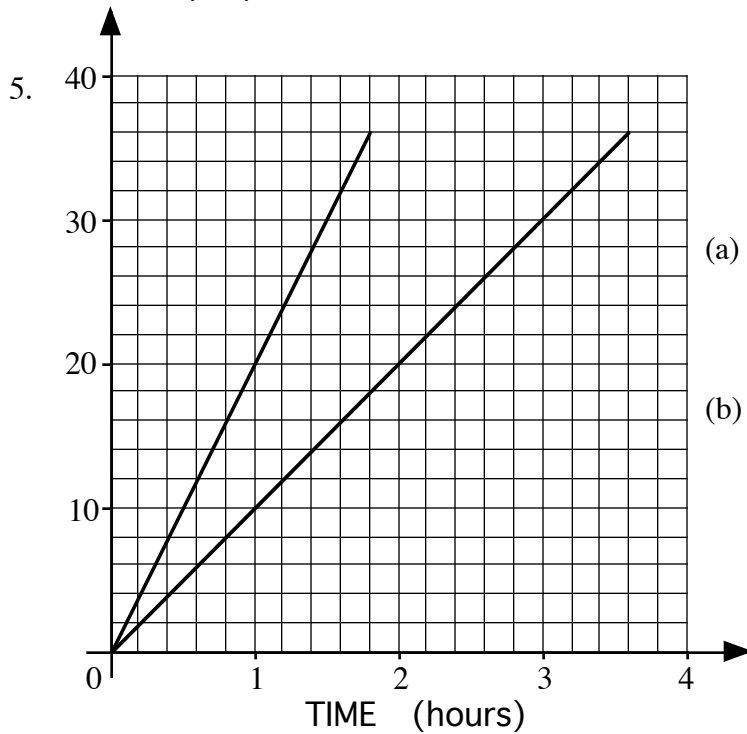
1. Evaluate: $1\frac{2}{3} \square \frac{4}{9}$ (2)

2. Remove the brackets and simplify: $(2x \square 3)(x + 5)$ (2)

3. If $a=3$ and $b=-6$, evaluate: $2a^2 + b$ (2)

4. Solve the equation: $3(x \square 2) = 8 \square 2(x \square 3)$ (4)

DISTANCE (km)

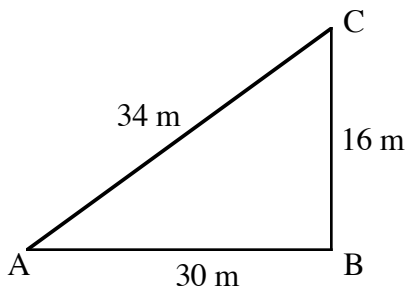


The graphs show the journeys of a cyclist and a runner travelling between two towns.

(a) How long, in minutes, does the cyclist have to wait for the runner to arrive? (1)

(b) Calculate the speed of:
 (i) the cyclist (3)
 (ii) the runner. (3)

6.



Show that triangle ABC is right-angled. (3)

Total 20 marks