

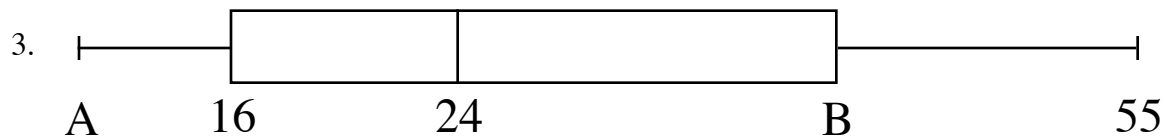
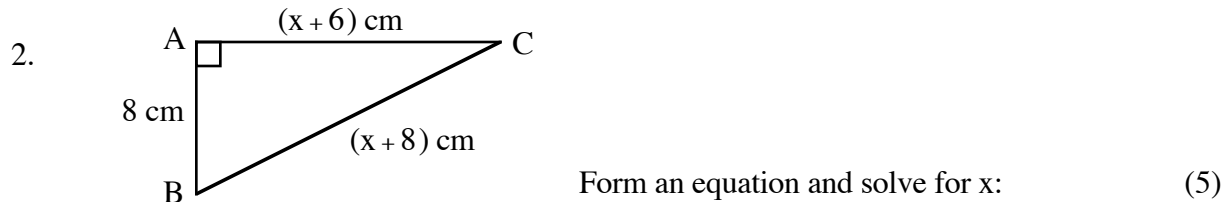
HOME EXERCISE 12

Set out carefully all appropriate working.

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

Use a calculator in question 5.

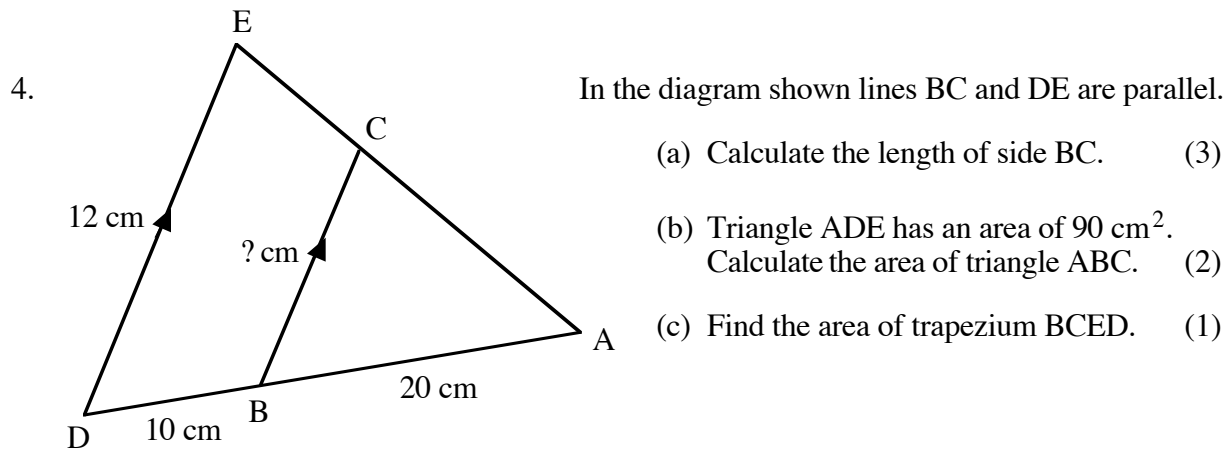
1. Evaluate: $3\frac{1}{6} \square \frac{3}{4} \square \frac{5}{9}$ (3)



The box plot shown illustrates some statistical results.

The range of the results is 45 and the semi-interquartile range is 13.

- (a) Find the values of A and B. (2)
- (b) State the percentage of the results that lie between 16 and 24. (1)



5. Light travels at a speed of $9 \cdot 461 \square 10^{12}$ kilometres per year.
A star is a distance of $1 \cdot 507 \square 10^{14}$ kilometres from Earth.

How long, in years, does it take light from the star to reach Earth? (3)

Write your answer correct to **3 significant figures**.

Total 20 marks