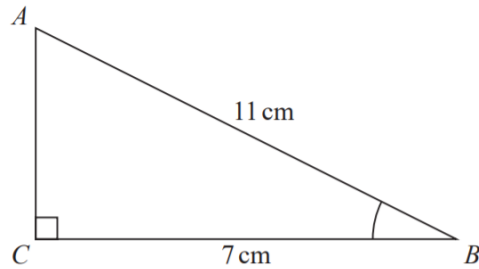


Four Maths Questions at Different Levels – Question Set 3

Easy higher tier GCSE



- (a) Work out the size of angle ABC .
Give your answer correct to 1 decimal place.

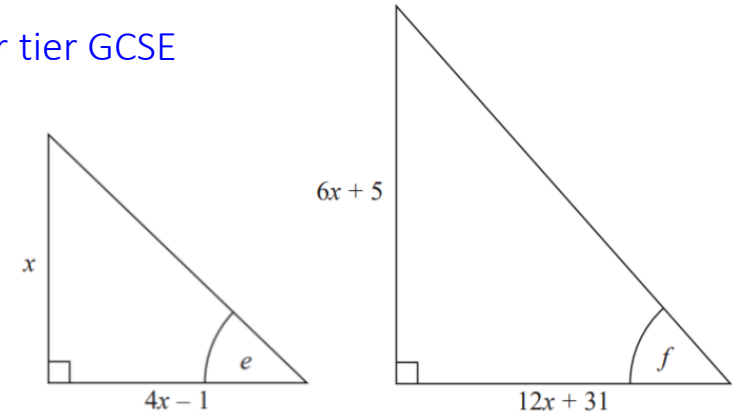
The length of the side AB is reduced by 1 cm.

The length of the side BC is still 7 cm.
Angle ACB is still 90°

- (b) Will the value of $\cos ABC$ increase or decrease?
You must give a reason for your answer.

Edexcel GCSE, June 2018, Paper 3

Harder higher tier GCSE



Given that $\tan e = \tan f$ find the value of x .

Edexcel GCSE, June 2018, Paper 3

Something interesting

$$x^1, x^3, x^4, x^2, x^0$$

Five numbers are arranged in order from least to greatest as above.

Where does $-x^{-1}$ belong in the list?

FMSP (AMSP) Problem Solving Materials

A Level

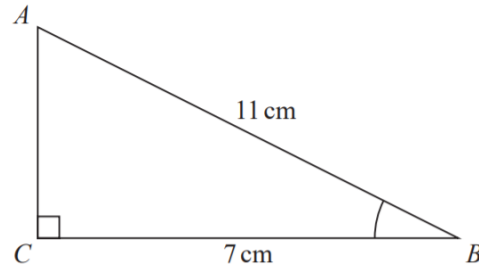
The curve C has parametric equations $x = 7 \sin t - 4$, $y = 7 \cos t + 3$, $-\frac{\pi}{2} \leq t \leq \frac{\pi}{3}$

- Show that the cartesian equation of C can be written as $(x+a)^2 + (y+b)^2 = c$, where a , b and c are integers which should be stated.
- Sketch the curve C on the given domain, clearly stating the endpoints of the curve.
- Find the length of C . Leave your answer in terms of π .

Edexcel A Level Unit Tests, Parametric Equations

Four Maths Questions at Different Levels – Answers Set 3

Easy higher tier GCSE



- (a) Work out the size of angle ABC .
Give your answer correct to 1 decimal place.

The length of the side AB is reduced by 1 cm.

The length of the side BC is still 7 cm.
Angle ACB is still 90°

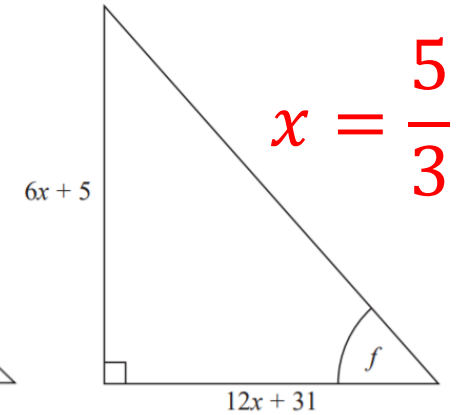
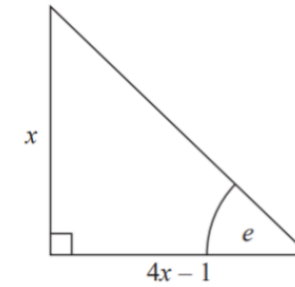
- (b) Will the value of $\cos ABC$ increase or decrease?
You must give a reason for your answer.

$$\widehat{ABC} = 50.5^\circ$$

Increase

Edexcel GCSE, June 2018, Paper 3

Harder higher tier GCSE



$$x = \frac{5}{3}$$

Given that $\tan e = \tan f$ find the value of x .

Edexcel GCSE, June 2018, Paper 3

Something interesting

$$x^1, x^3, x^4, x^2, x^0$$

Five numbers are arranged in order from least to greatest as above.

On the far right hand side,
since $-1 < x < 0$

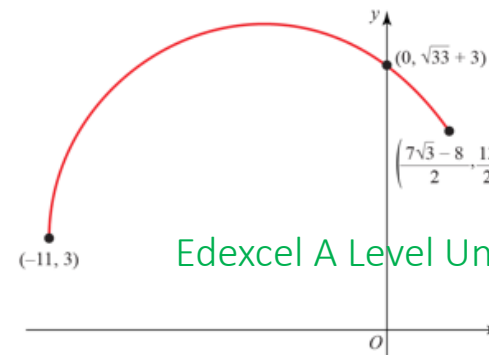
Where does $-x^{-1}$ belong in the list?

FMSP (AMSP) Problem Solving Materials

A Level

The curve C has parametric equations $x = 7 \sin t - 4$, $y = 7 \cos t + 3$, $-\frac{\pi}{2} \leq t \leq \frac{\pi}{3}$

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- Find the length of C . Leave your answer in terms of π .



$$\frac{35}{6}\pi$$

Edexcel A Level Unit Tests, Parametric Equations