

Credit Mathematics – 2008 – Paper 1

KU	RE
2	
2	
2	
3	
2	
1	
1	
	3

1. Evaluate

$$24.7 - 0.63 \times 30$$

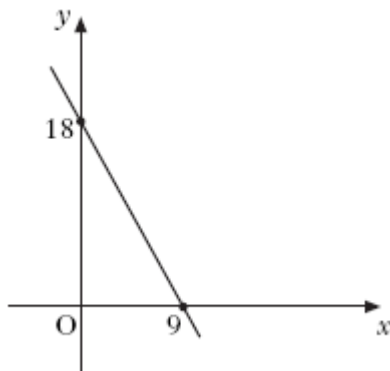
2. Factorise fully

$$5x^2 - 45$$

3. Change the subject of the formula to H

$$W = BH^2$$

4. A straight line cuts the x -axis at the point $(9, 0)$ and the y -axis at the point $(0, 18)$ as shown.



Find the equation of the line.

5. Express as a single fraction in its simplest form

$$\frac{1}{p} + \frac{2}{p+5}$$

6. Jane enters a two-part race.

- (a) She cycles for 2 hours at a speed of $(x + 8)$ kilometres per hour.

Write down an expression in x for the distance cycled.

- (b) She then runs for 30 minutes at a speed of x kilometres per hour.

Write down an expression in x for the distance run.

- (c) The **total** distance of the race is 46 kilometres.

Calculate Jane's **running** speed.

KU	RE
1	1
	2
2	3
2	

7. The 4th term of each number pattern below is the **mean** of the previous three terms.

(a) When the first three terms are 1, 6 and 8, calculate the 4th term.

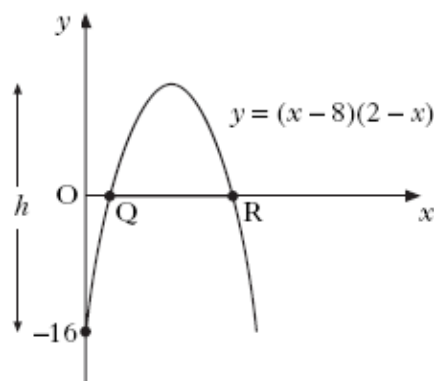
(b) When the first three terms are x , $(x + 7)$ and $(x + 11)$, calculate the 4th term.

(c) When the first, second and fourth terms are $-2x$, $(x + 5)$, _____, $(2x + 4)$,

Calculate the 3rd term.

8. The curved part of the letter A in the *Artwork* logo is in the shape of a parabola.

The equation of this parabola is $y = (x - 8)(2 - x)$



(a) Write down the coordinates of Q and R.

(b) Calculate the height, h , of the letter A.

9. Simplify

$$m^3 \times \sqrt{m}$$

