PICK 'N' MIX

Name:

....

....

Higher 7+

Paper 4

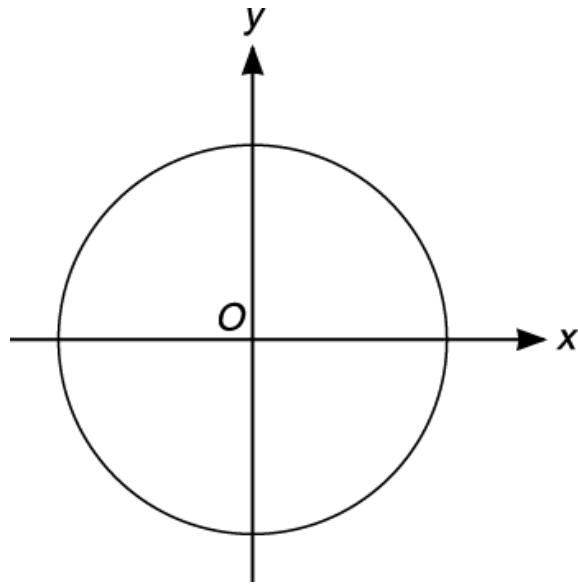|	Q	Topic	My Mark	Max Marks
Non Calculator	1			4
	2			4
Calculator	3			8
	4			3
	5			6
	6			5
				30

Revision list:

What I need to remember:

AJagger

Question 1

The diagram shows a circle, centre O.

[4]

The circumference of the circle is 20π cm.

Find the equation of the circle.

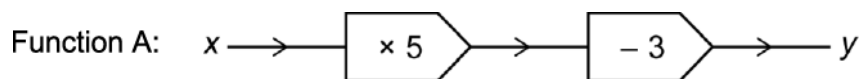...

[4]

Question 2

In a group of 46 students

- 28 passed English
- 31 passed science
- 12 did not pass either.

Find the probability that a student selected at random from those who passed science also passed English.

....

[4]

Question 3

(a) Here is a function.

Function A: $x \longrightarrow$ [× 5] $\longrightarrow$ [− 3] $\longrightarrow y$

i. Work out y when x = −2.

....
[1]

ii. Work out x when y = 72.

....
[1]

iii. Find the inverse of function A.

[2]

(b) Here is another function.

Function B: $x \longrightarrow$ [× d] $\longrightarrow$ [+ e] $\longrightarrow y$
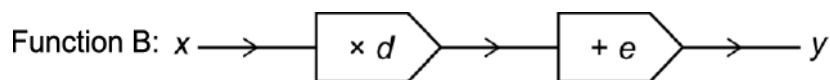
The diagram below shows a composite function.

$m \longrightarrow$ [Function A] $\longrightarrow$ [Function B] $\longrightarrow n$
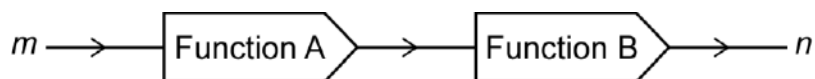
When m = 4, n = 53.
When m = 9, n = 128.

Find the values of d and e.

d = ...

e = ...
[4]

Question 4

A lift can safely take a total weight of 600 kg, correct to the nearest 10 kg.

Can you be certain that eight people, each of weight 75 kg correct to the nearest kg, can safely travel in the lift?

Show how you decide.

[3]

Question 5

Solve algebraically these simultaneous equations.
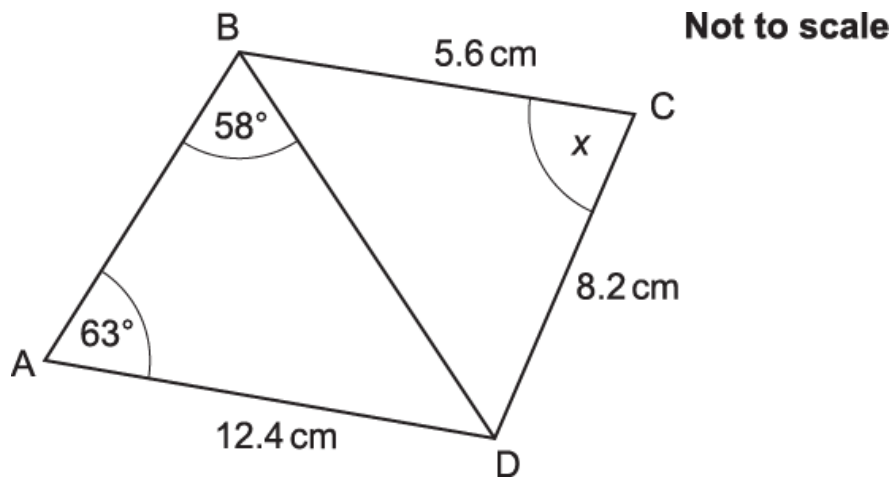
$y = 2x^2 + 16x - 9$

$y = 5x - 3$

x = ... y = ...

x = ... y = ...

[6]

Question 6

ABD and CBD are triangles.

B

5.6 cm

Not to scale

C

58°

x

63°

A

8.2 cm

12.4 cm

D

BC = 5.6 cm, CD = 8.2 cm and AD = 12.4 cm.
Angle DAB = 63° and angle DBA = 58°.

Calculate the angle marked x.

.... °

[5]