

Pearson
Edexcel

Name: _____

BennettMaths Edexcel 2H – Part 2

10 A biased dice is thrown 80 times.

The table shows information about the number that the dice lands on each time.

Number on dice	1	2	3	4	5	6
Frequency	15	9	13	11	8	24

George throws the dice twice.

(a) Work out an estimate for the probability that the dice will land on 6 both times.

.....
(3)

Simon is going to throw the same dice n times and record the number it lands on each time.

He will use his results to work out a more reliable estimate for the probability in part (a).

(b) What can you say about the value of n ?

.....
.....
.....
(1)

(Total for Question 10 is 4 marks)

11 Use algebra to solve the simultaneous equations

$$2x + 6y = 1$$

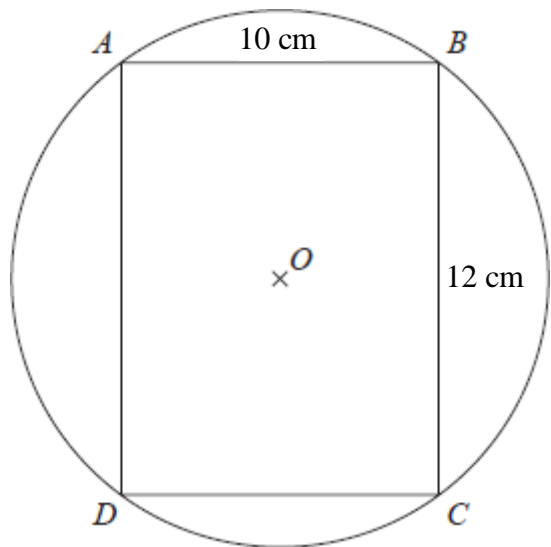
$$5x - 4y = 31$$

$$x = \dots\dots\dots$$

$$y = \dots\dots\dots$$

(Total for Question 11 is 4 marks)

- 12 The points A , B , C and D lie on a circle, centre O .
 $ABCD$ is a rectangle.

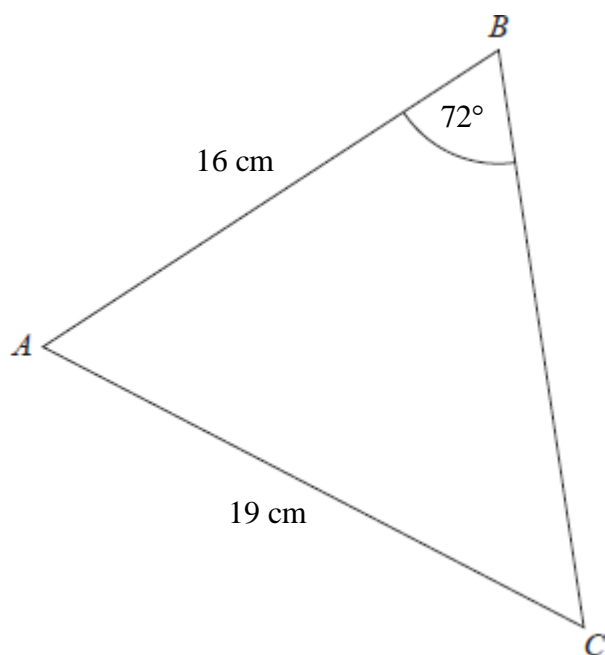


$AB = 10\text{ cm}$ $BC = 12\text{ cm}$

Work out the circumference of the circle.
Give your answer correct to 3 significant figures.

..... cm
(Total for Question 12 is 4 marks)

- 13** ABC is a triangle.



Calculate the size of angle BAC .
Give your answer correct to 1 decimal place.

.....^o

(Total for Question 13 is 4 marks)

- 14** Show that $\frac{x^2 - x - 12}{2x^2 + 5x - 3}$ can be written in the form $\frac{ax + b}{cx + d}$ where a, b, c and d are integers.

(Total for Question 14 is 3 marks)

- 15** Here are the first four terms of a quadratic sequence.

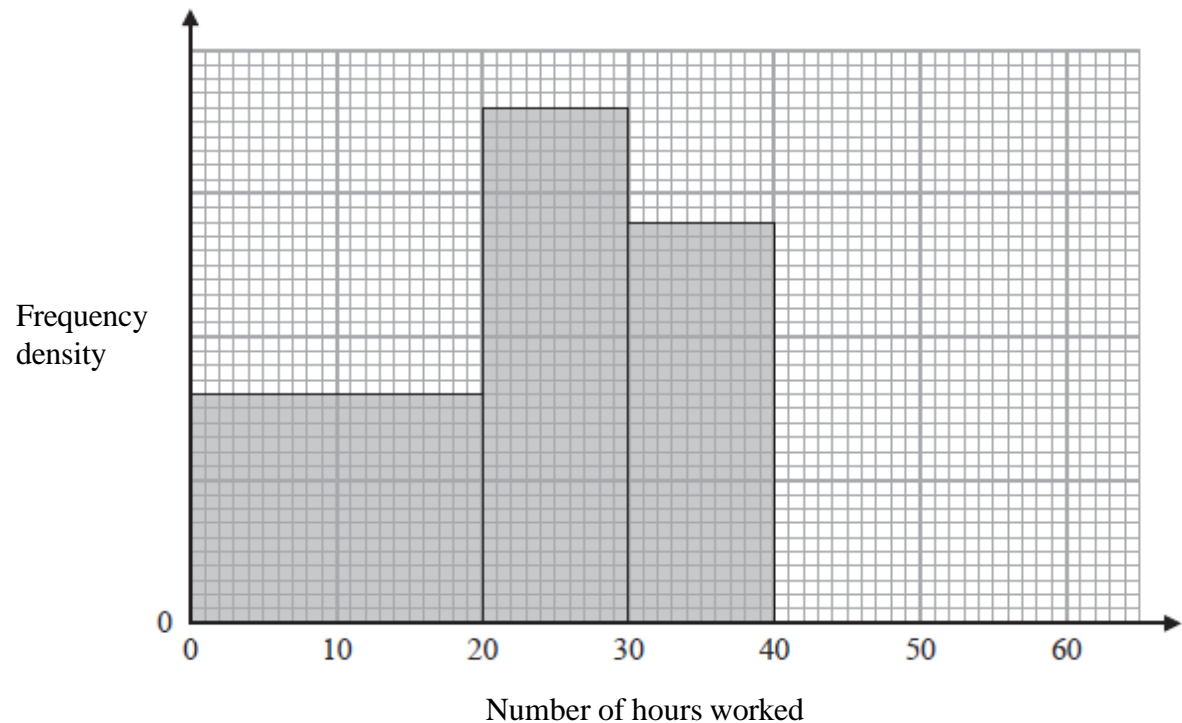
2 3 6 11

Find an expression, in terms of n , for the n th term of this sequence.

.....
(Total for Question 15 is 3 marks)

16 The histogram gives information about the number of hours some nurses spent at work last week in a hospital.

The histogram is incomplete.



14 nurses worked between 30 and 40 hours.
 12 nurses worked between 40 and 60 hours.

(a) Use this information to complete the histogram.

(2)

No nurse worked for more than 60 hours.

(b) Work out the total number of nurses in the hospital.

(2)

(Total for Question 16 is 4 marks)