7 CHOC TIME put a scratchcard in each tube of chocolates.
Some scratchcards win a prize.

(a) The probability of not winning a prize is 0·88.

What is the probability of winning a prize?

(a) ..... [1]

(b) The tops of the tubes come in three colours, yellow, red and green.
The probability that a particular top is yellow is 0·3.
The probability that it is red is equal to the probability that it is green.

What is the probability that a particular top is green?

(b) ..... [2]

3

[Turn over

8 (a) Last year the population of Little Watersmeet was 340.
This year it has increased by 58 people.

What is 58 as a percentage of 340?

(a) .....% [2]

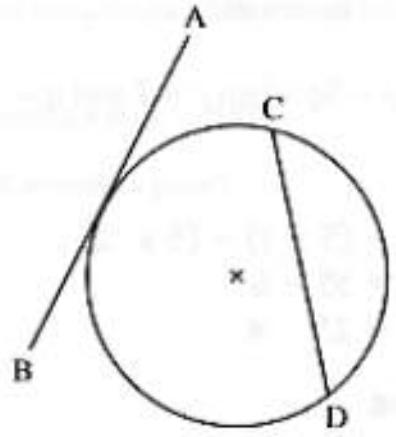
(b) Last year the population of Upper Watersmeet was 1450.
This year it has decreased by 16%.

What is the population this year?

(b) ..... [3]

5

9



(a) Give the mathematical name for the two straight lines in the diagram above.

(a) Line AB is a..... [1]

Line CD is a..... [1]

(b) The radius of a circular flywheel is 16 cm.

Calculate the area of this circle.
Give your answer correct to 1 decimal place.

(b) .....cm^2 [3]

5

10 Lauren's class was set this question for homework:

Find the value of $5p - 3q$ when $p = 7$ and $q = ^-2$.

Here is her answer.

$$\begin{aligned} 5p - 3q &= (5 \times 7) - (3 \times ^-2) \\ &= 35 - 6 \\ &= 29 \quad \times \end{aligned}$$

(a) Explain why her answer is wrong.

.....

..... **[1]**

(b) Work out the correct answer.

(b)..... **[1]**

2

11 (a) Yumino divides her time for revision between Mathematics and Science in the ratio 1 : 3.
She spends 252 minutes in total on revision.

How much time does she spend on Mathematics?

(a) .....minutes **[2]**

(b) Her practice test in Mathematics lasted 45 minutes and her test in Science lasted 60 minutes.

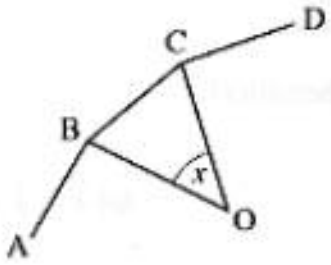
Write these times as a ratio in its simplest form.

(b) ..... : ..... **[2]**

4

TURN OVER FOR QUESTION 12

12 The diagram below shows part of a regular polygon, centre O.



Not to scale

(a) Explain why angle x cannot be 50°.

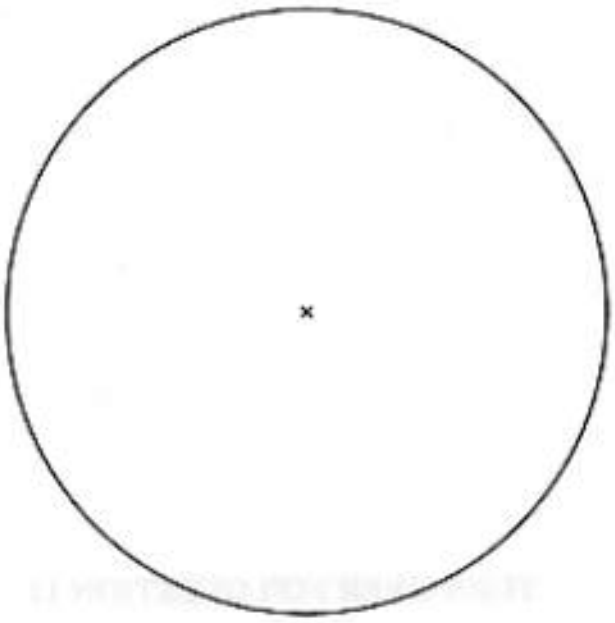
.....

..... [1]

(b) When $x = 40°$ how many sides does the polygon have?

(b)..... [2]

(c) Inside the given circle draw an equilateral triangle.
The vertices must lie on the circumference of the circle.
Show all your construction lines.



[3]

6