

National Assessments
5 -14

Mathematics

Level F

Name

Date.....

Assessment 00A



Assessment is for Learning

Questions 1 - 6 will be read to you.

Write down your answer to these questions without doing any working.

1

2

3

4

5

6

7

Multiply

$$4203.5 \times 30$$

Answer: _____

3717

8

How many bottles each containing 0.7 litres, can be filled from a container holding 21 litres?

Answer: _____ bottles

3664

9

4 bags of sugar are weighed as part of a quality control process. Their total weight is 4.038 kg.

Bag 1 weighs 1.1 kg.

Bag 2 weighs 0.986 kg.

Bag 3 weighs 1.09 kg.

What is the weight of the fourth bag?

Answer: _____ kg

3776

10

The total distance Adam cycles to and from work each day is $6\frac{2}{3}$ miles.

What distance does Adam cycle altogether in a working week of 5 days?

Answer: _____ miles

3774

11

Simplify

$$\frac{5 \times 32}{8}$$

Answer: _____

3346

12

A tennis player and coach share winnings from a tennis tournament in the ratio 7:2.

If £126 000 is won, how much will the coach get?

Answer: £ _____

3699

13

Simplify

$$12g^2 + 8h + 4g - 10g^2 + 5h - g$$

Answer: _____

3703

14

The distance between two points measures 15cm on a map.

The scale of the map is 1:5000.

What is the actual distance? Give your answer in **metres**.

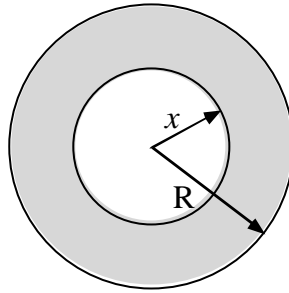
Answer: _____ metres

3835

15

The shaded area of this circular disc can be approximated by the formula

$$A = 3(R^2 - x^2)$$



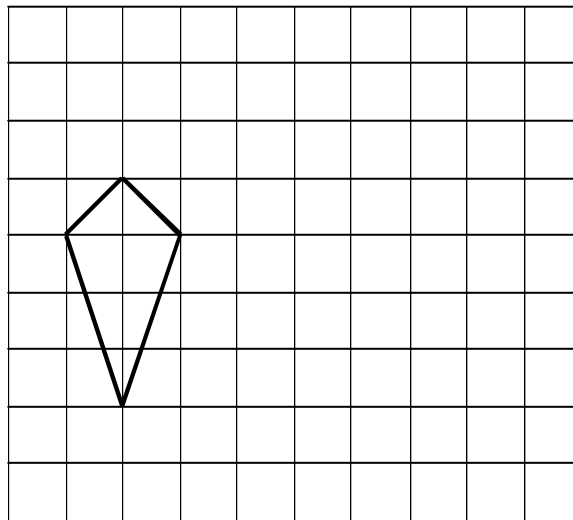
Find the value of A when $R = 6$ and $x = 2$

Answer: _____ square units

3728

16

Enlarge this shape using a scale factor of 2.

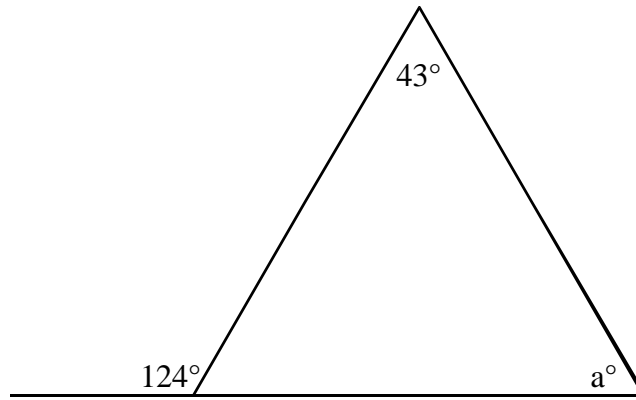


Draw the new shape on the right hand side of the grid.

3745

17

Calculate a° .



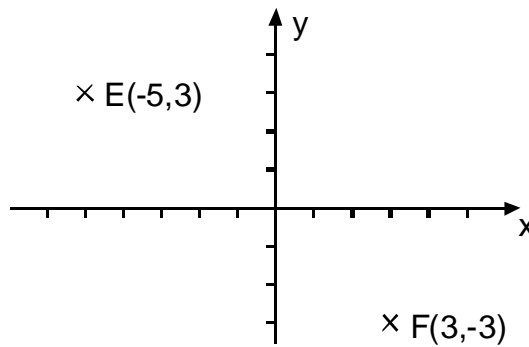
Answer: _____ $^\circ$

3794

18

Two ships, E and F, are positioned on a co-ordinate grid, ready for a game of 'battleships'.

Calculate the distance between the two ships.



Answer: _____ units

3800

19

In a traffic survey the number of vehicles waiting when traffic lights changed from red to green was recorded.

The table below shows the data over thirty light changes.

5	4	6	11	8	10	11	12	11	13
11	14	11	7	10	6	5	7	4	6
9	10	9	12	11	9	6	11	11	5

Find the mode.

Answer: _____ vehicles

3811

20

The results of rolling a dice 100 times are given in this frequency table.

Dice value	Frequency
1	14
2	17
3	18
4	15
5	17
6	19

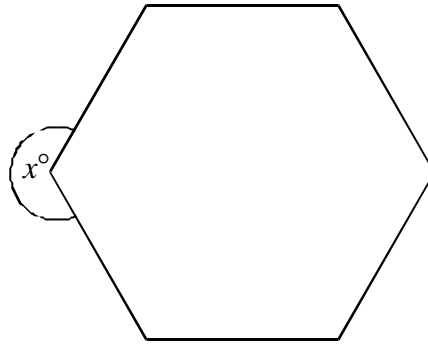
What is the mean value of the numbers rolled?

Answer: _____

3819

21

The diagram represents a regular hexagon.



Calculate the size of the angle marked x° .

Answer: _____ $^\circ$

3822

22

The table below shows the number of planes arriving at an airport from different parts of the world during one month.

Arrivals from	Number of planes
Asia	100
Europe	200
Far East	180
North America	260
Other Countries	160
Total	900

What is the probability that a plane chosen at random arrived from Asia?

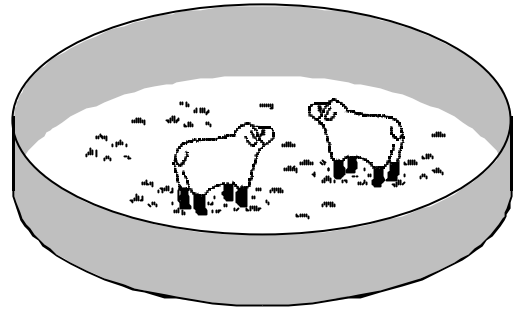
Answer: _____

3904

23

A circular sheep pen has a radius of 12 m.

Calculate the area of the pen.

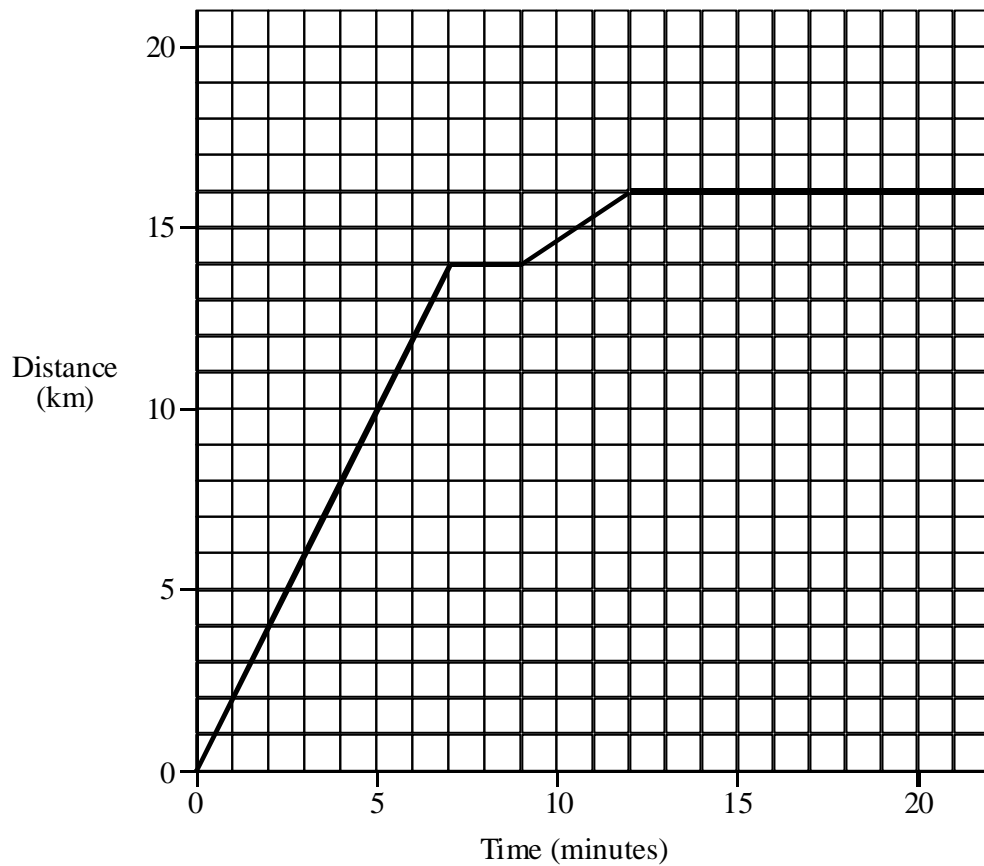


Answer: _____ m²

3851

24

The graph shows the journey of a fire engine to a house fire, 16 km away.



How many minutes altogether did it take for the fire engine to arrive at the house fire?

Answer: _____ minutes

3831

25

Below are the marks scored in a test by a class of 30 pupils.

12 8 38 29 25 52 8 47 9 11
18 25 13 41 16 15 23 25 35 39
15 6 32 36 44 37 21 17 30 38

The frequency table below is to be used to record this information.

Complete the 'Mark' column in the table. Use equal class intervals.

Mark	Tally
1 – 8	
9 –	

3911

26

Round 8.588 to 2 decimal places.

Answer: _____

3856

27

25 competitors record their scores in an archery competition.

60 73 40 28 10 16 56 34 44 56
40 52 48 38 22 50 28 64 44 58
24 58 62 54 34

Complete the stem-and-leaf chart below to show the scores.

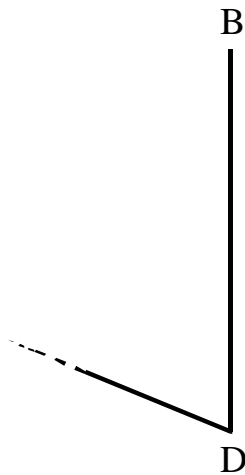


Key
n = 25
1| 0 represents a score of 10

3917

28

Complete the diagram below to draw rhombus ABCD with diagonals AC = 9 cm and BD = 5 cm.



3932

29

A ball-pool in a children's play area holds 2700 red, yellow and blue balls.

- There are 900 red balls.
- There are twice as many yellow balls as blue balls.

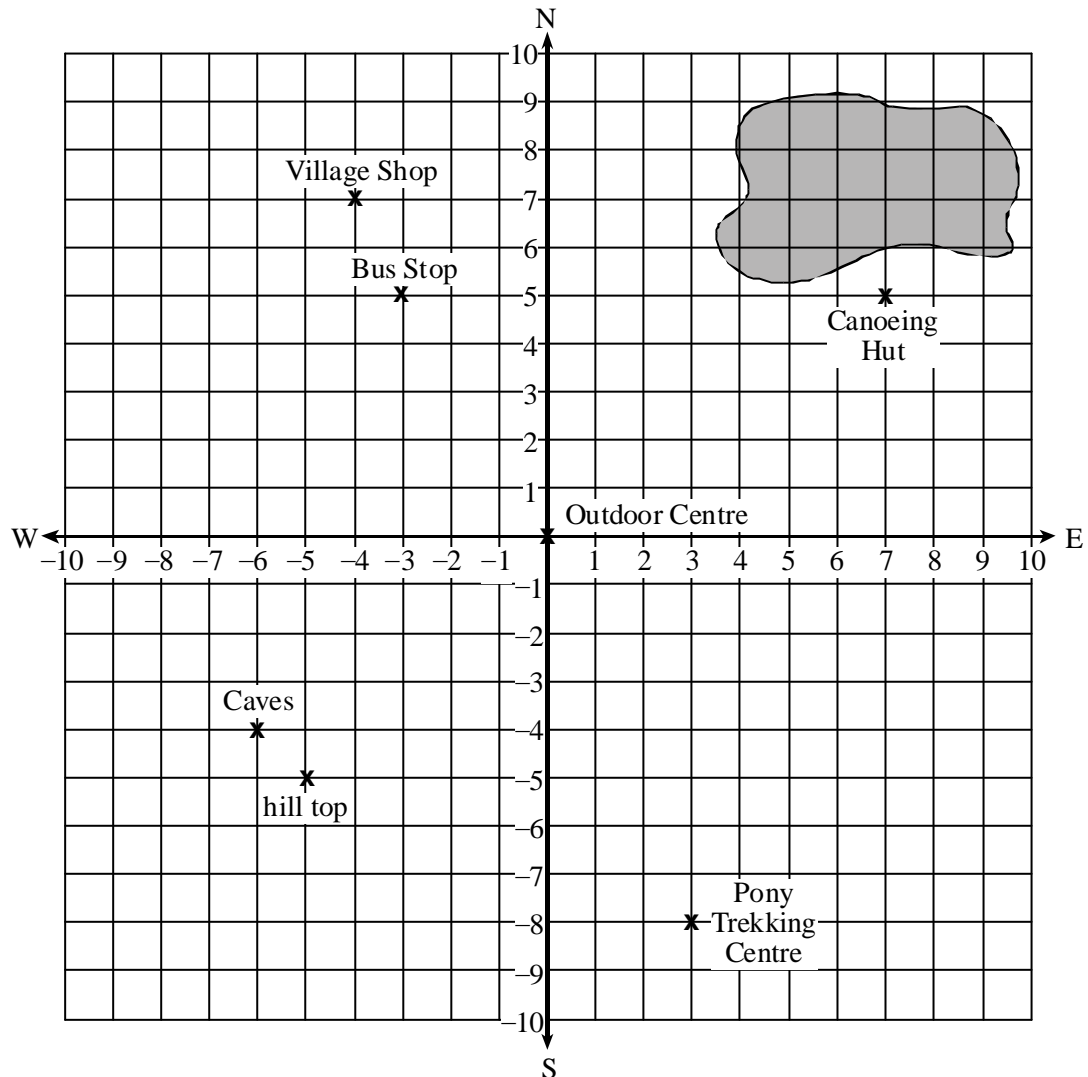
How many yellow balls are there?

Answer: _____ yellow balls

3914

30

On the map below the scale is: 1 unit on map represents 100 metres on the ground.



A garage is on a bearing of 315° from the Pony Trekking Centre.

The garage is also 800 metres from the Village Shop.

Mark the position of the garage on the grid above.

3933

Mental Questions - for teacher use only

Questions 1 - 6 should be read to the pupils.

Read each question twice. Pause for 10 seconds between each question.

Remind pupils that they must write their answer to each question without doing any working.

(After completing the oral mental questions, instruct pupils to continue with the questions written in their assessment booklet.)

1

Divide negative 14 by 2.

3937

2

Write three twentieths as a decimal.

3943

3

What is the value of 20 squared?

3953

4

A van travels at an average speed of 30 miles per hour. How long would it take to travel 120 miles?

3970

5

What is the total length of 3 curtain rails each 1.5 metres long?

3968

6

25% of a number is 40. What is the number?

3976
