

11+ ENTRANCE EXAMINATION Mathematics

SAMPLE PAPER

Time allowed: 60 minutes

Instructions

- Use black ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided – there may be more space than you need.

Information

- The total mark for this paper is 100.
- Calculators are NOT allowed
- The marks for each question are shown in bracket use this as a guide as to how much time to spend on each question.

Advice

- Write your answers on the dotted lines provided.
- Show your working so it is clear how you obtained your answers.
- Try to answer every question.
- Check

Candidate Name _____

Candidate Current School _____

1. a) Write down the number eighteen thousand and thirty six in figures.

Answer:
(1)

b) Write down the number eleven and nine thousandths as a decimal.

Answer:
(1)

2. Calculate $572 + 2639$

Answer:
(1)

3. Calculate $6431 - 729$

Answer:
(2)

4. Calculate 893×87

Answer:
(2)

5. Calculate $2874 \div 6$

Answer:
(2)

6. A menswear shop sells 7 times as many white shirts as checked shirts. 72 shirts are sold in total. How many white shirts are sold?

Answer:
(2)

7. Gavin buys four bottles of cola at £1.09 each and 8 chocolate bars at 62p. How much change should he receive from a ten-pound note?

Answer: £.....
(2)

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8. A length of rope is 5m long. It is cut into four unequal lengths. Three of the pieces are 147cm, 132.5cm and 67cm. How long is the fourth piece?

Answer:cm
(3)

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9. Fill in the missing numbers to make each equation correct.

e.g. $36 + 32 = 49 + \underline{19}$

a) $92 + 29 = 47 + \dots\dots\dots$

b) $87 - 48 = 63 - \dots\dots\dots$

c) $50 \times 9 = 9 \times \dots\dots\dots$

d) $9600 \div 80 = 720 \div \dots\dots\dots$

(4)

-
10. Sara thinks of a number. She subtracts twelve, then divides by two and then adds fifteen. Her answer is 37. What is the number that Sara first thought of?

Answer:

(3)

11. Tom is 142cm tall and Harry is 168cm tall. James is half way between Tom's and Harry's height. Work out James' height.

Answer:cm

(4)

12. A cyclist cycles 45 kilometres in 3 hours. How many minutes does it take him to cycle 1500 metres at the same rate?

Answer:mins
(3)

13. For each set of numbers put a **circle** around the **smallest number** and **underline** the **largest number**.

a) 2.506 2.56 2.006 2.056 2.6

b) $\frac{1}{4}$ $\frac{6}{7}$ $\frac{7}{8}$ $\frac{8}{9}$ $\frac{1}{5}$

c) $\frac{9}{20}$ 0.55 $\frac{3}{5}$ 0.25 $\frac{53}{100}$

d) 28cm $\frac{1}{5}$ m 2600mm 0.28m 25cm

(6)

14. 3 masses are measured to be 720g, 3.46kg, and 2kg 53g.
What is their total mass, give your answer in grams.

Answer:g
(2)

15. I am thinking of a number.

It is less than 100.

It is odd.

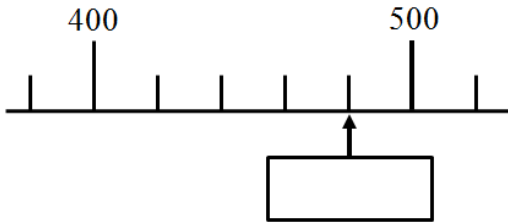
It is a square number.

It is not a multiple of three nor five.

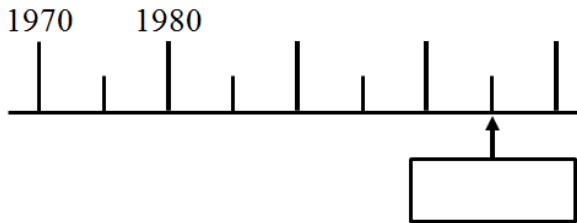
Write down the two possible values of my number

16. Here are parts of four different number lines. Write in the number indicated by the arrow.

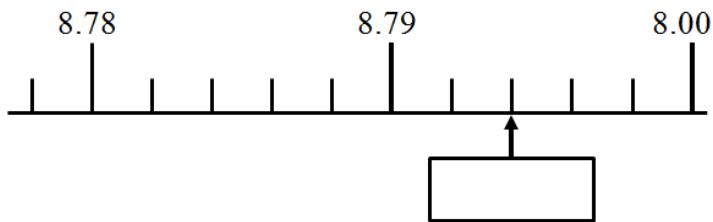
a)



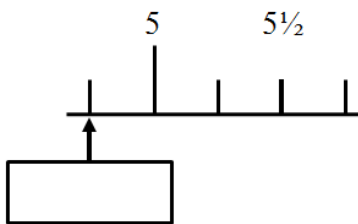
b)



c)



d)



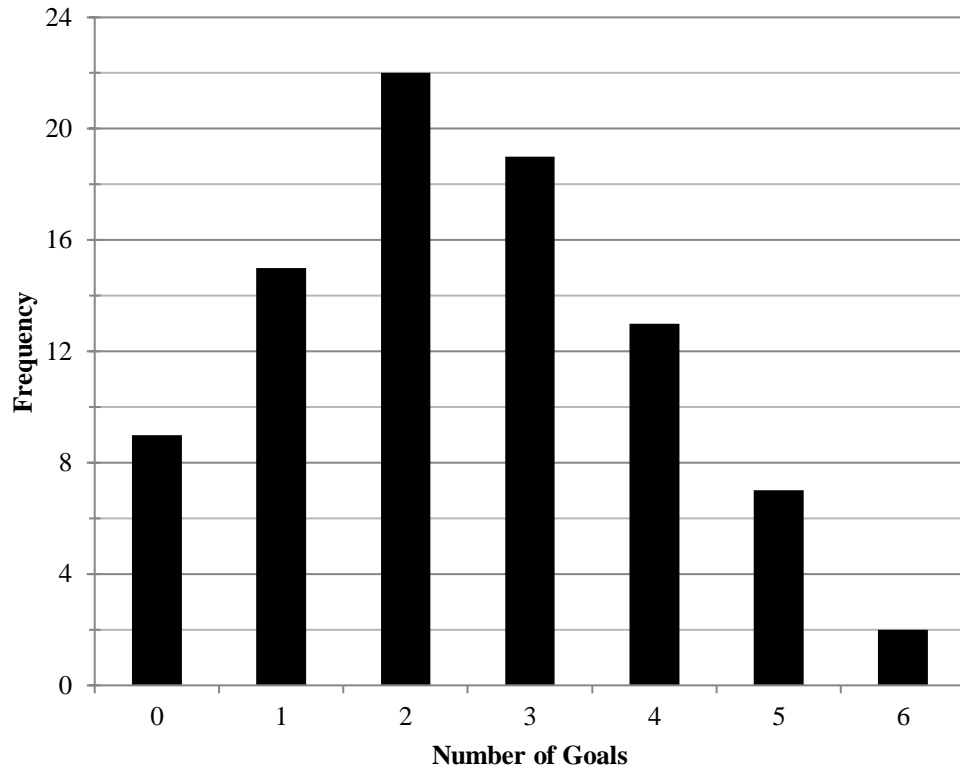
(6)

17. Write down two fractions which are equivalent to $\frac{4}{5}$ where one of the numbers is twenty.

Answer: or

(3)

18. The bar chart shows the number of goals scored by entrants in a penalty competition.



a) What was the highest number of goals scored? Answer.....

b) How many people scored **more** than two goals? Answer:

c) How many people took part in the competition? Answer:

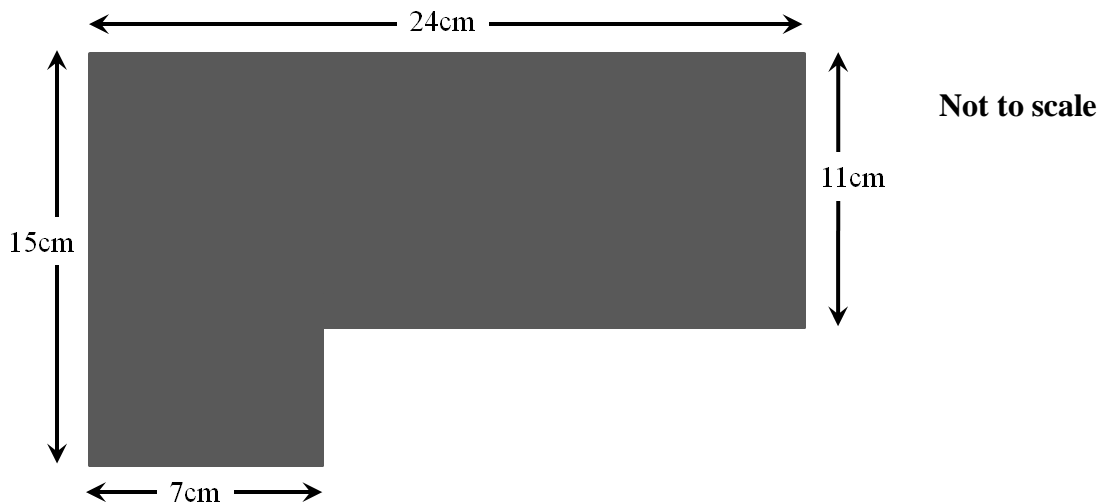
d) How many goals were scored altogether? Answer:

19. Complete the diagram so that it has reflective symmetry in the dotted line.



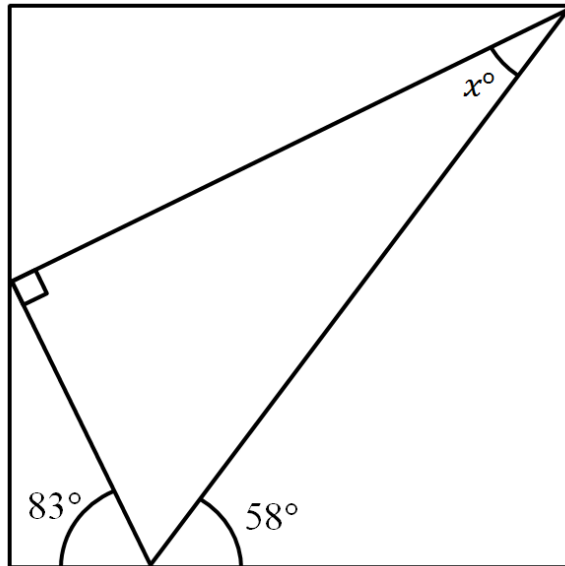
(3)

20. What is the area of this shape?



Answer: cm^2
(4)

21. Here is a **right angled triangle** inside a **rectangle**. Calculate the value of angle **x**.
Do **not** use a protractor.



Answer:
(4)

22. This calculation is correct: **396 x 279 = 110484**
Use this result to answer these questions:

a) 3.96×2.79 Answer:

b) $110484 \div 279$ Answer:

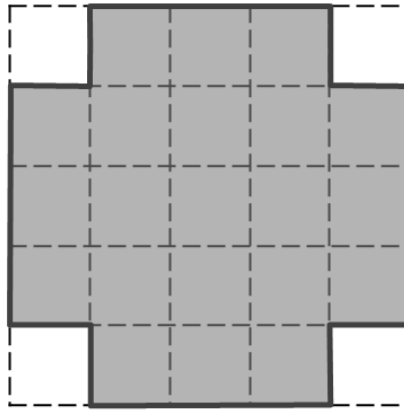
c) $1104.84 \div 2.79$ Answer:

d) $1104.84 \div 396$ Answer:

(8)

23. A tile in the shape of a cross is made by drawing a square of length 10cm and then removing four squares of length 2cm from each corner.

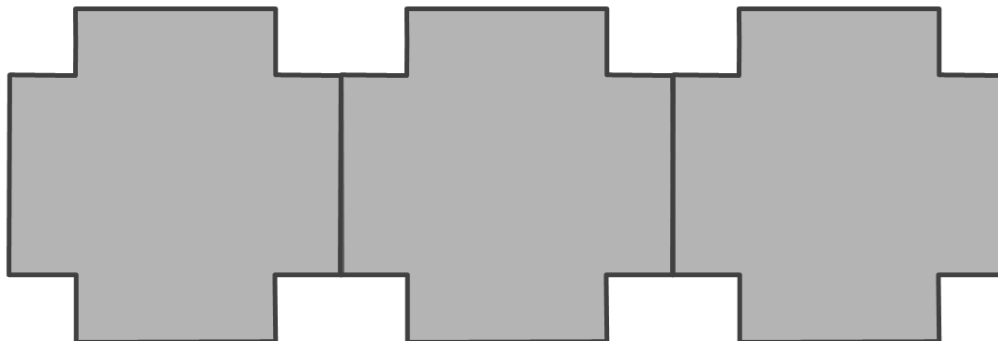
What is the perimeter of the cross shape tile?



Answer:cm

(3)

Robert puts three tiles together to make the shape below. What is the perimeter of his shape?



Answer:cm

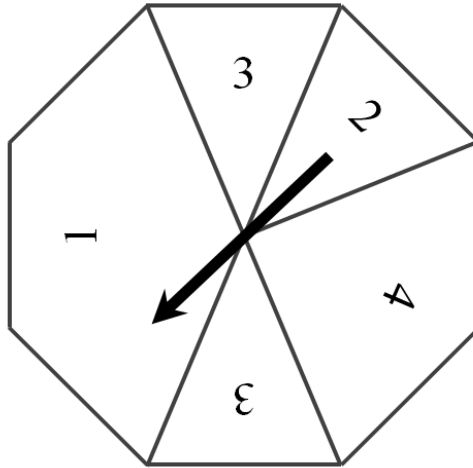
(3)

Ravi put ten tiles together in a similar way. What is the perimeter of his shape?

Answer:cm

(3)

24. a) Here is an octagonal spinner:



For each statement put a tick (✓) if it is true or a cross (x) if it is false.

3 is the **most likely** score

3 and 4 are **equally likely** scores

Odd and even scores are **equally likely**

A score of less than 2 is **more likely** than a score of 2 or more

(6)

b) John is designing a spinner. He wants it to only have the numbers 1, 2, 3 and 4 on.

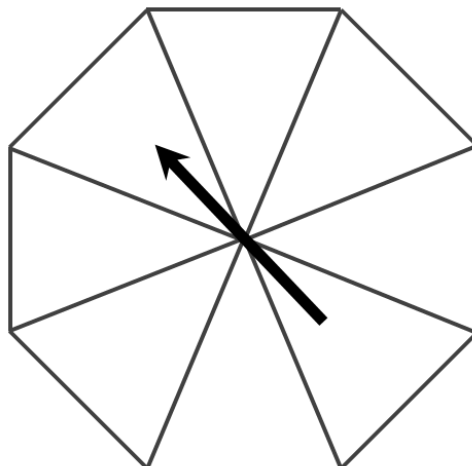
He wants the probability of getting a 4 to be 0.5.

He wants the probability of getting a 2 and a 3 to be equally likely.

He wants the probability of getting a 1 to be greater than the probability of getting a 3.

Enter the number(s) 1, 2, 3 or 4 into each of the eight sections of the spinner.

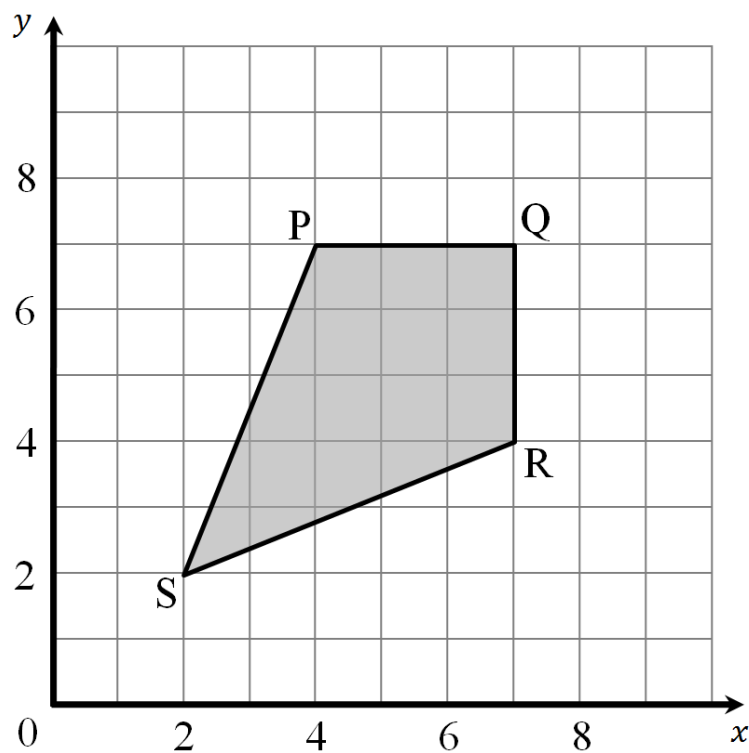
(5)



25. With reference to the shape below:

a) Write down the co-ordinates of the point **P** (2)

b) Name the quadrilateral **PQRS** (2)



END OF EXAMINATION