THIS PAPER MUST **NOT** BE TAKEN FROM THE EXAMINATION ROOM

A	B	C

KING EDWARD'S SCHOOL

BIRMINGHAM

ADMISSION EXAMINATION 2011

Your name (in full) .....

Your candidate number .....

Name of your present school .....

MATHEMATICS

Time allowed: One hour

- Aim to complete as much as you can in the time given, without making mistakes.
- Don't start **Section C** until you have done as much as you can on **Sections A and B**.
- **No calculators, calculator watches, or pencil-cases with tables are allowed.**

A

1. (a) What number is 1000 more than 56821?

Answer_____

(b) What number is 0·02 more than 16·99?

Answer_____

(c) What is the smallest whole number that you can make using the digits 4, 3, 9 and 1? Use each digit only once.

Answer_____

2. (a)
$$\begin{array}{r} 8888 \\ 666 \\ + \quad 44 \\ \quad\ 2 \\ \hline \\ \hline \end{array}$$

(b)
$$\begin{array}{r} 54321 \\ - \ 12345 \\ \hline \\ \hline \end{array}$$

(c) I start counting at 19 and go up to 89. I take one second to say each number. How long do I take altogether?

Answer_____

(d) What number must be added to 79 to give the result 2100?

Answer_____

3. (a) 25×18 is more than 24×18
How much more?

Answer_____

(b) $7498 \times 4 =$

Answer_____

3. (c) $546 \times 37 =$

Answer_____

(d) $1080 \div 8 =$

Answer_____

4. (a) What is half of $79\frac{1}{2}$?

Answer_____

(b) What is 75% of 40?

Answer_____

(c) What is 40% of 75?

Answer_____

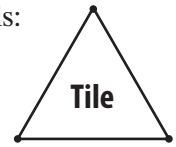
(d) What is 125% of 24?

Answer_____

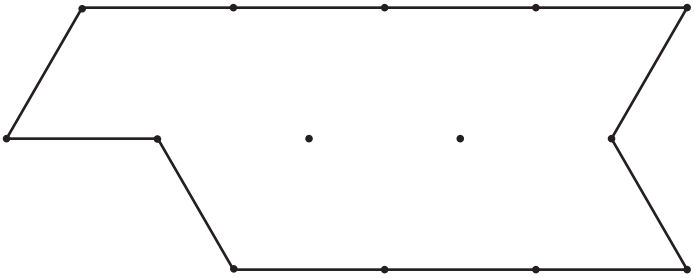
(e) There are 55 apples in a box. 40% of them are red and the rest are green. How many green apples are there in the box?

Answer_____

5. (a) How many tiles shaped like this:

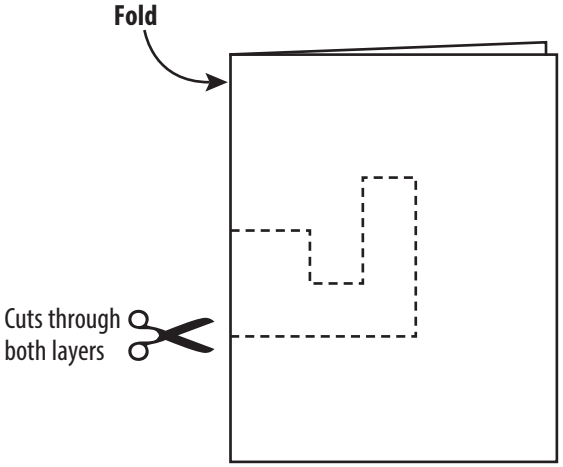


are needed to cover the figure below.

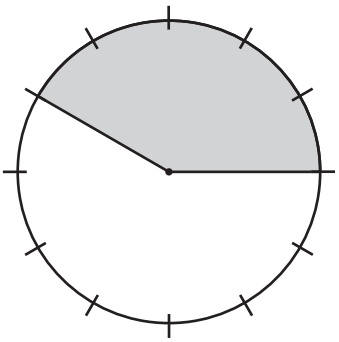


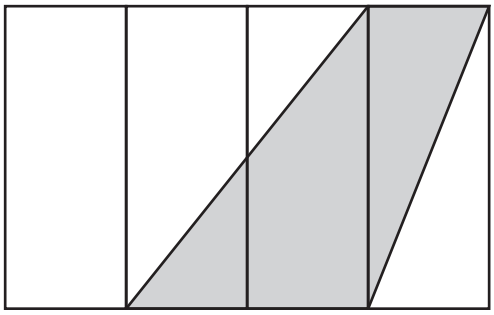
Answer_____

5. (b) I folded a piece of paper in half and cut out a shape. Draw a picture to show what the cut out shape will look like when it is opened up and flattened out.



5. (c) What fraction of each figure is shaded?





Answer_____ **Answer**_____

6. (a) 3333 p = £ _____

(b) 3 cm = _____ m

(c) 1 m 23 cm = _____ m

(d) 4 m 5 cm = _____ m

(e) 6 m 78 cm = _____ cm

(f) 9 km 10 m = _____ m

(g) $2\frac{1}{3}$ hr = _____ mins

7. Write the correct number in each box.

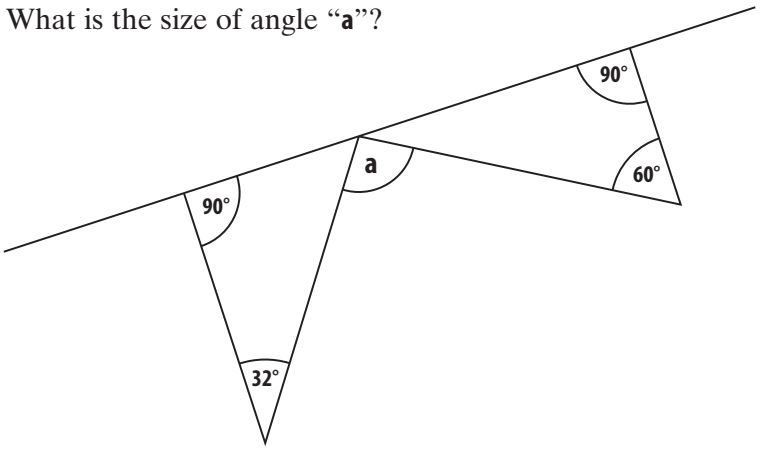
$$\frac{8}{15} = \frac{\square}{60} = \frac{\square}{135} = \frac{48}{\square} = \frac{56}{\square} = \frac{128}{\square}$$

8. Which of the following is greater than 2 but smaller than 3?

$\frac{10}{3}$ $\frac{9}{5}$ $\frac{11}{4}$ $\frac{6}{2}$

Answer_____

9. What is the size of angle "**a**"?



Answer_____

10. Write the correct number in each box.

(a) $6{\cdot}25 \times \square = 6250$

(b) $\dfrac{53{\cdot}2}{\square} = 5{\cdot}32$

(c) $602 \times \square = 60{\cdot}2$

(d) $100 = 36 \div \square$

11. (a) $1 - \dfrac{4}{11} =$

Answer_____

(b) $\dfrac{1}{5} + \dfrac{11}{20} =$

Answer_____

12. Woody and Buzz are busy studying a train timetable. Unfortunately Buster has walked all over it with his muddy paws and they can't read three entries. Complete the table for them.

Route	Departs	Arrives	Journey Time
London – Birmingham	09:15		1 hr 20 min
London – Manchester	10:05	12:03	
London – Carlisle		15:12	3 hr 17 min

B

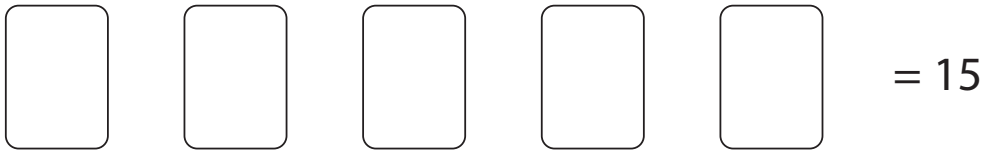
13. An oak tree was planted in the year in which Lord Ownlynose was born. He died in 1940, aged 80. How old is the oak tree now (in 2011)?

Answer_____

14. Here are three numbers and two operations on five cards.



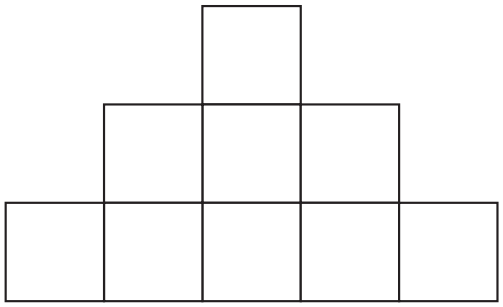
Arrange the cards below to give the answer 15.



15. I want to cut out a circle of radius 6 cm from a **square** piece of card.
What is the area of the smallest square I can use?

Answer_____

16. The figure below is made up of nine equal squares. The perimeter of the figure is 128 cm. What is the area of one of the squares?



Answer_____ cm^2

17. Buzz, Woody, Ham, Rex, Slinky and Mr Potato Head went to the cinema. They spent £33 on tickets and £20·40 on food. They shared the cost equally. How much did each have to pay?

Answer_____

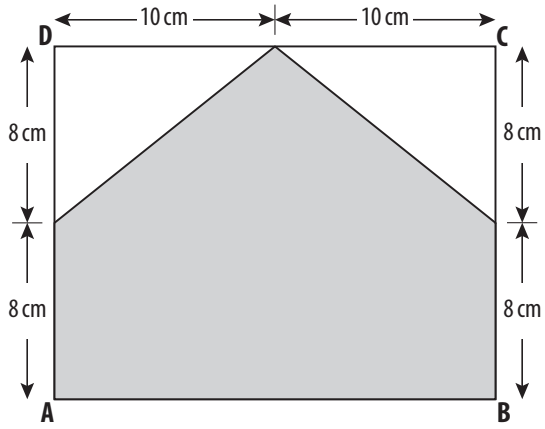
18. I opened a book at random and multiplied the two visible page numbers together. The answer was 506. What were the numbers on the two pages?

Answer_____

19. A local football team has thirty-four shirts numbered from 1 to 34 on the back only. How many digit 1's are used on the complete set of shirts?

Answer_____

20. **A B C D** is a rectangle. What is the area of the shaded region?



Answer_____ cm^2

21. Five football teams play each other once. How many matches will need to be played?

Answer_____

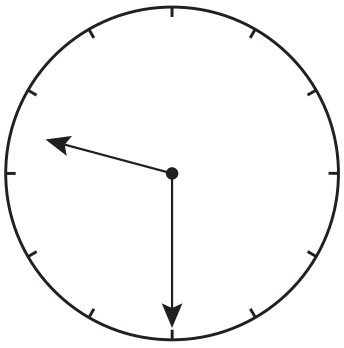
22. A carpet which measures 4 m × 3 m covers 60% of the floor area of a rectangular room. The length of the room is 5 m. What is its width?

Answer_____

23. Buzz is three times as heavy as Jessie. If Buzz is 450 g heavier than Jessie, what is the weight of Buzz in grams?

Answer_____ grams

24. What is the angle between the hands of a clock at half past nine?



Answer_____

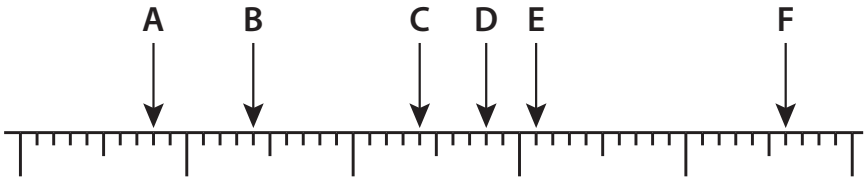
25. I am thinking of a number less than 60.
When my number is divided by 4, it gives remainder 3.
When my number is divided by 5, it gives remainder 4.
When my number is divided by 6, it gives remainder 5.

What number am I thinking of?

Answer_____

26. Match the following numbers to the labelled points on the number line.

2·798 2·801 2·778 2·794 2·816 2·784



2·798 is matched with .....

2·801 is matched with .....

2·778 is matched with .....

2·794 is matched with .....

2·816 is matched with .....

2·784 is matched with .....

C

27. Yesterday's tomorrow is Thursday.
What day is the day after tomorrow's yesterday?

Answer_____

28. Write the correct digit in each box.

(a)

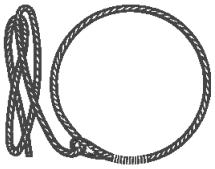
$$\begin{array}{r} 1\ 1\ 1\ \square \\ -\ \ \square\ 1\ 1 \\ \hline \ \ 1\ \square\ \square \\ \hline \end{array}$$

(b)

$$7\overline{)\ \square\ 4\ \square\ 6}$$

$$\begin{array}{r} \ \ \ \ 6\ \square\ \square \\ \hline 7\overline{)\ \square\ 4\ \square\ 6} \end{array}$$

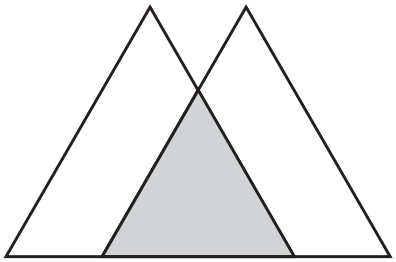
29. Woody's lasso is 30 cm longer than Jessie's. Jessie's lasso is 60 cm longer than Rex's. The total length of the three lassos is 3 m. What is the length of Rex's lasso?



example of a lasso

Answer_____ cm

30. The figure shows two identical overlapping triangles. Four-ninths of **each** triangle is shaded. What fraction of the **whole** figure is shaded?

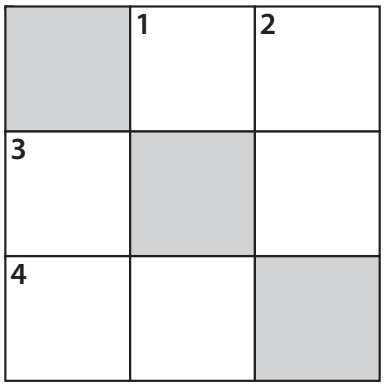


Answer_____

31. Woody and Mr Potato Head start at the same point on the toy room floor and walk in opposite directions for 80 cm. Each then turns left and walks 40 cm. Finally each of them turns left again and walks 80 cm. How far apart are they then?

Answer_____

32. A crossnumber is like a crossword, but with digits in place of letters.
One digit goes in each small square and there are **no zeros**.
Complete this crossnumber.



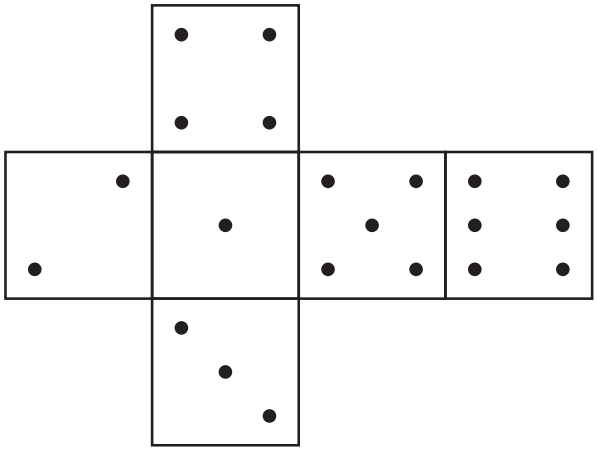
Across Clues

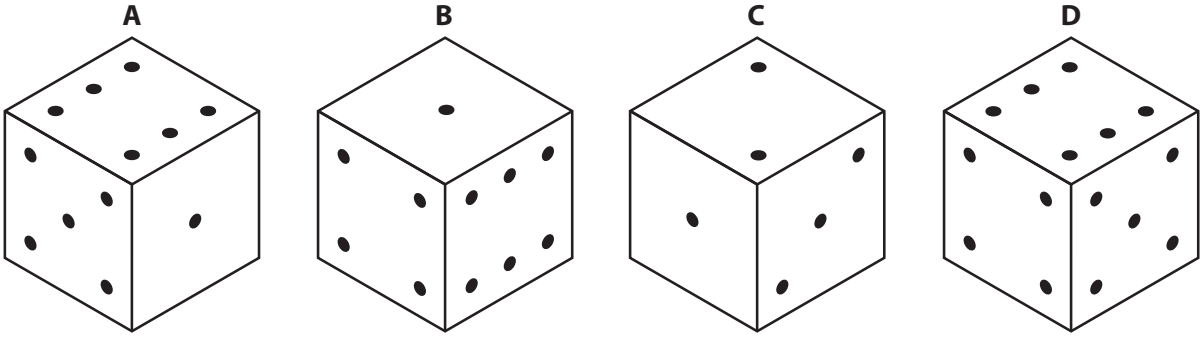
1. Square number
4. A multiple of 16

Down Clues

2. 2×1 across
3. A cube

33. Which of the dice below can be made from this net?





Answer_____

34. Woody organised a quiz night in the toy room. He asked 25 questions.

For each correct answer you gained 4 points.
For each incorrect answer you lost 2 points.
For each question you did not attempt you scored 0 points.

Rex answered all but one of the questions and got a score of 66 points.
How many correct answers did he have?

Answer_____

35. My special number has a 9 in the units column. If I remove the 9 from the units column and place it at the left hand end of the number, but leave all the other digits unchanged, I get a new number. This new number is four times my special number. What is my special number?

Answer_____