

# Kent College, Canterbury

## Entrance Examination 2007 Mathematics 1

Name .....

Time : 45 minutes

**Read the following carefully:**

1. Start at the beginning and work through the questions as quickly and as carefully as you can.
2. If you try a question and find you cannot answer it, leave it and go onto the next.
3. Do any working in the space provided.
4. Do not use a calculator.

1. a) Write in figures the number five thousand and twenty- six.

Answer: ..... (1)

b) Write in words the number 94262.

Answer: ..... (1)

c) What is the value of 6 in each of the following numbers?

1567

Answer: ..... (1)

35629

Answer: ..... (1)

---

2. Calculate and show all your working

a)  $98 + 29 + 89 =$

b)  $7658 - 4874 =$

Answer: ..... (1)

Answer: ..... (1)

c)  $97 \times 6 =$

d)  $895 \div 5 =$

Answer: ..... (1)

Answer: ..... (1)

e)  $759 \times 84 =$

Answer: ..... (3)

---

3. Jack has these number cards:

**8                      5                      2                      4**

a) What is the largest 3-digit number he can make?

Answer: ..... (1)

b) What is the largest 2-digit number he can make?

Answer: ..... (1)

c) What is the smallest 4-digit number he can make?

Answer: ..... (1)

d) Make a number between 7500 and 8300,  
using only the card numbers.

Answer: ..... (1)

---

4. I buy bars of chocolate costing 54p each.

a) How many can I buy for £4?

Answer: ..... (1)

b) How much money will I still have?

Answer: ..... (1)

5. A bus left at 11.43 am. The journey took 47 minutes. When did it arrive?

Answer: ..... (2)

---

6. Here is a list of numbers:

<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>

**From the numbers above**

a) Write down a square number.

Answer: ..... (1)

b) Write down a multiple of 6.

Answer: ..... (1)

c) Write down 3 prime numbers.

Answer: ..... (3)

d) Write down 2 factors of 24.

Answer: ..... (2)

e) Write down a number which is in both the 4 and 3 times tables.

Answer: ..... (1)

7. For the following patterns find the next two terms:

a) 1, 4, 7, 10, .....

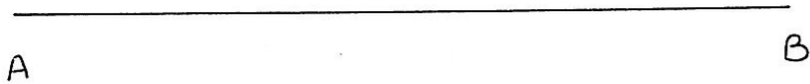
Answer: ..... (2)

b) 90, 65, 40, .....

Answer: ..... (2)

---

8. a) Measure the line AB.



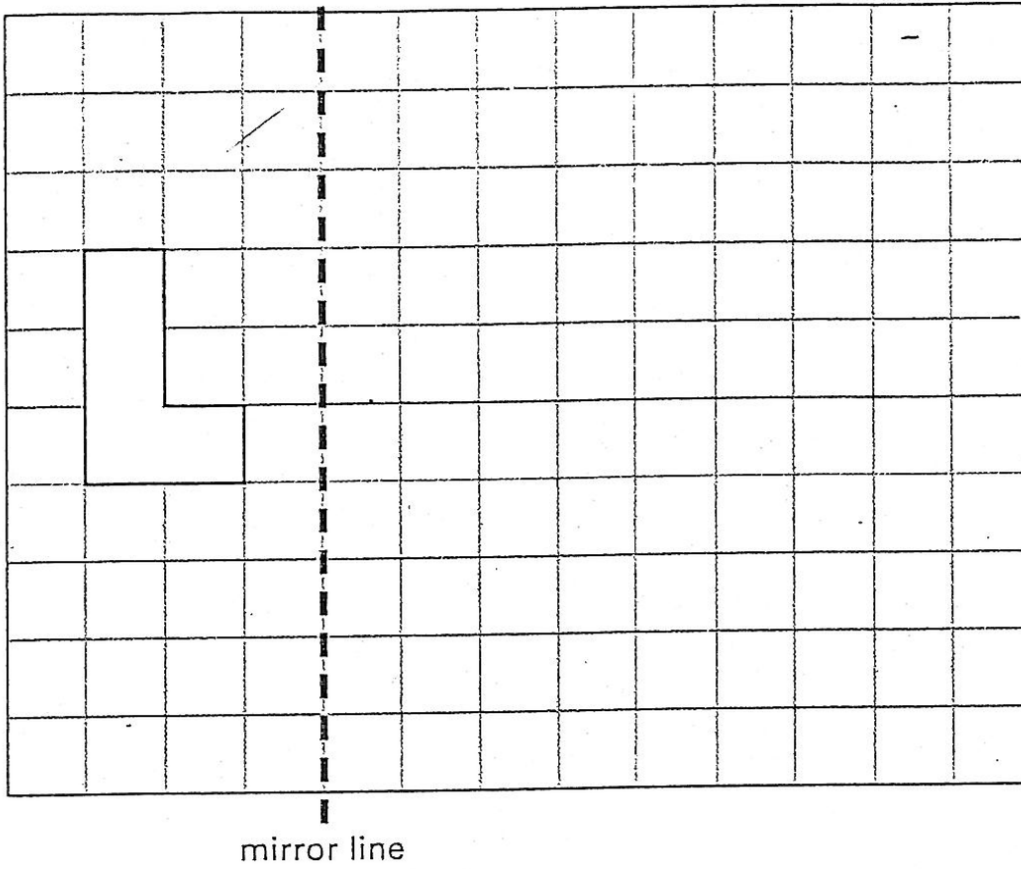
Answer: ..... (1)

b) Mark the point P which is 2.5cm from A. (1)

c) What fraction of AB is PB?

Answer: ..... (2)

9. Using a ruler draw the reflection of the shape in the **mirror line**.



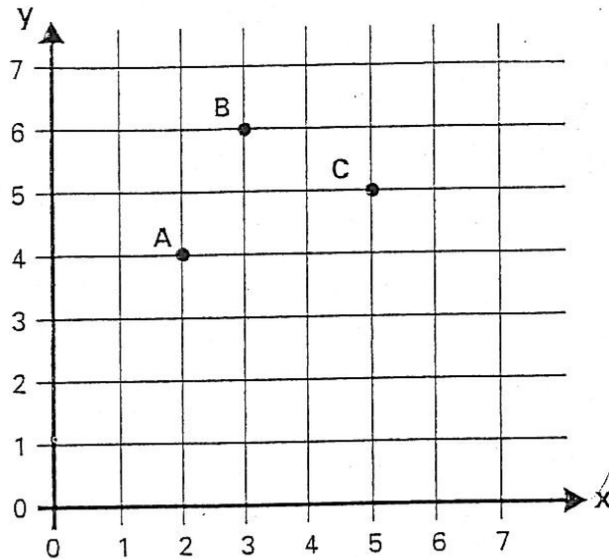
(2)

---

10. I add 5 to a number and then multiply the result by 8. The answer is 72. What number did I start with.

Answer: .....(2)

11.



**A, B, and C** are 3 corners of a square.

What are the coordinates of A? (.....,.....) (2)

What are the coordinates of the other corner? (.....,.....) (2)

---

12. Rabbit food costs 80p for 100grams.

What is the cost of 250 grams of rabbit food?

Show your working, giving your answer in £.

Answer: £..... (2)

13. A table shows how much time it takes to fly between some cities.

	Chicago ↓			
London →	8 hours 18 minutes	London ↓		
Moscow →	12 hours 9 minutes	3 hours 27 minutes	Moscow ↓	
Paris →	9 hours	1 hour 3 minutes	4 hours	Paris ↓
Tokyo →	12 hours 33 minutes	11 hours 50 minutes	9 hours 15 minutes	10 hours 3 minutes

a) How much time does it take to fly from Tokyo to Moscow?

Answer: ..... (2)

b) Emily's flight leaves London at 08.00.

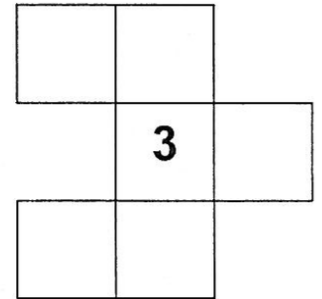
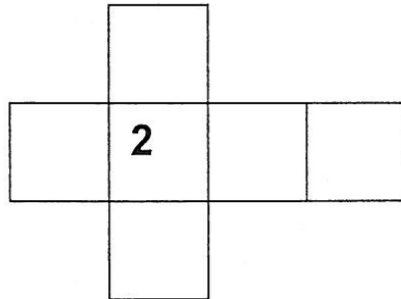
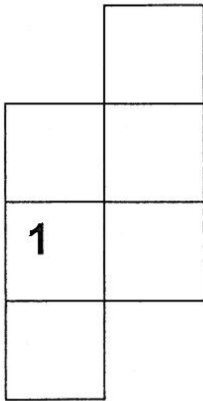
What time will it be in London when Emily is due to land in Chicago?

Answer: ..... (2)



14. Put a **tick** by each diagram that is the net of a cube.

Put a **cross** by each diagram that is not the net of a cube.



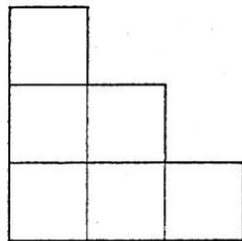
.....

.....

.....

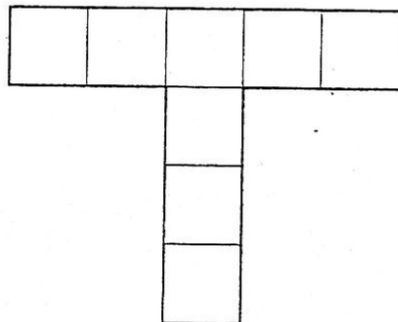
(3)

15. a) Shade one third of this shape.



(1)

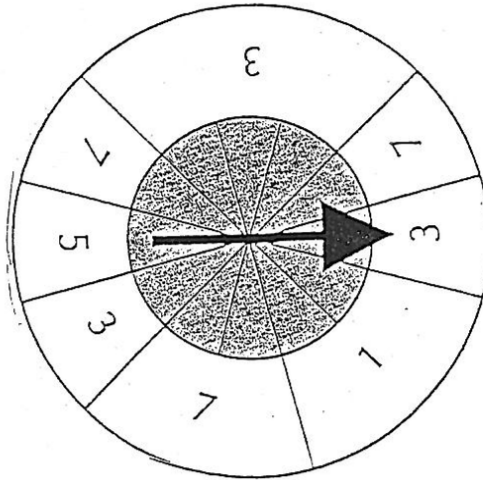
b) Shade one quarter of this shape.



(1)

16. The outer ring of this spinner is divided into 8 sections with numbers **1, 3, 5 and 7**.

The inner ring is divided into twelve equally sized sections.



a) If you spin the pointer which number is it **least likely** to stop on?

Answer: .....(1)

Explain why.

(1)

b) What is the probability of getting a **7** on this spinner?

Give your answer as a fraction.

Answer: .....(1)

c) What is the probability of getting a **1** on this spinner?

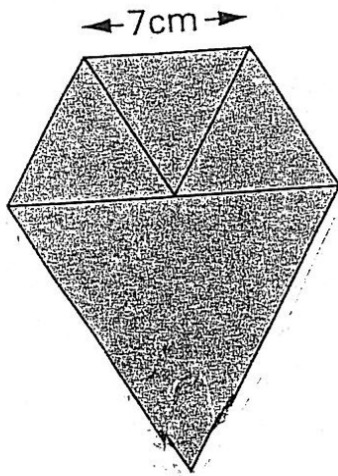
Give your answer as a fraction.

Answer: .....(1)

d) What is the probability of getting a **2** on this spinner?

Answer: .....(1)

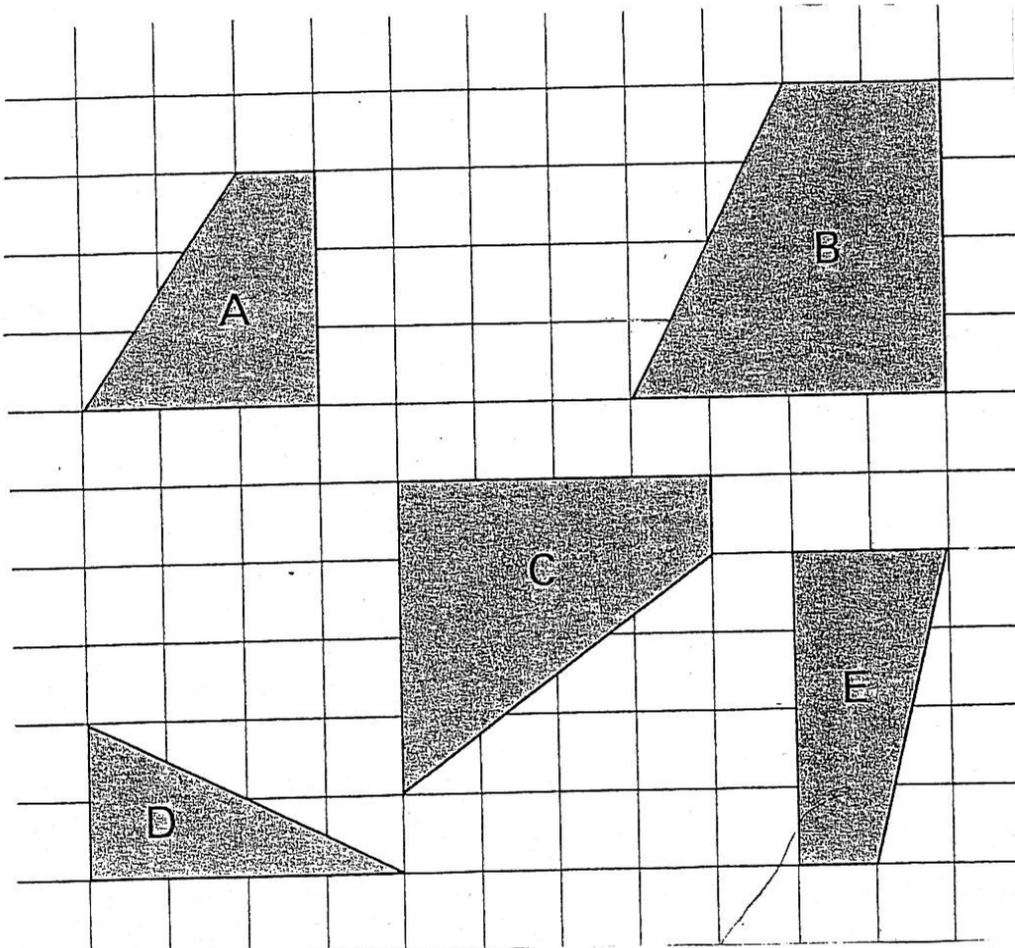
17. Lauren has three small equilateral triangles and one large equilateral triangle. The small triangles have sides of 7centimetres. Lauren makes this shape.



a) Calculate the perimeter of the shape.

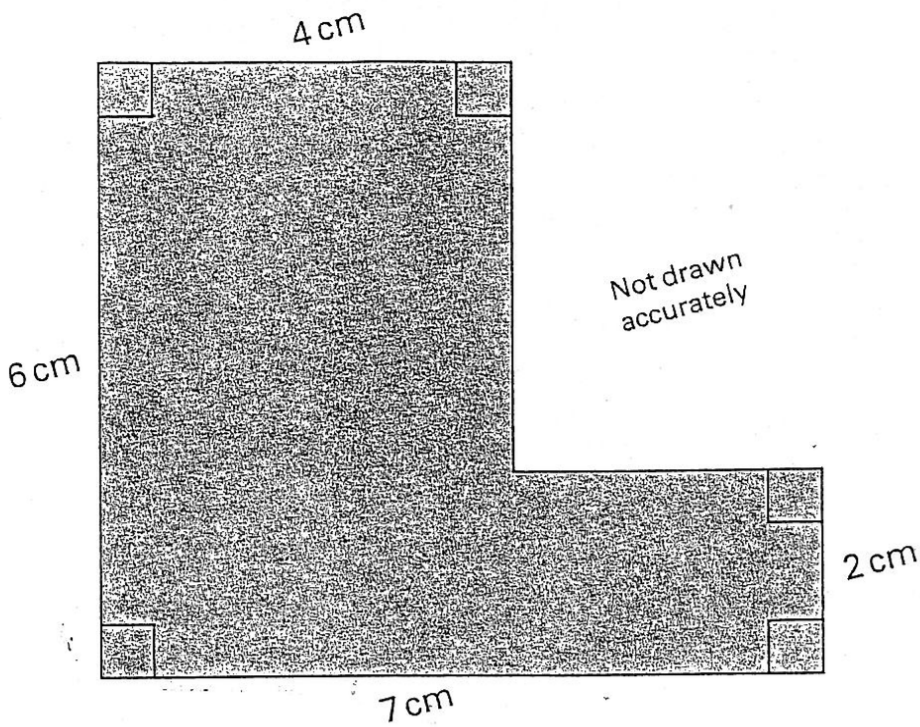
Answer.....(2)

18. Here are 5 shapes on a square grid  
Which 2 shapes fit together to make a square?



Answer.....(2)

19. What is the area of this shape?



Answer.....(3)

20. Fill in the empty boxes to complete the pattern.

$n + 10$	$4n + 10$	
$n + 5$		$7n + 5$
	$4n$	$7n$

(6)

21.

**Contact Lenses**

Pay £82 a year,  
and then just  
£6 for each pair  
of contact lenses you buy.

In one year Helen buys 16 pairs of contact lens. For that year, how much has she paid altogether? Show all your working.

Answer.....(2)

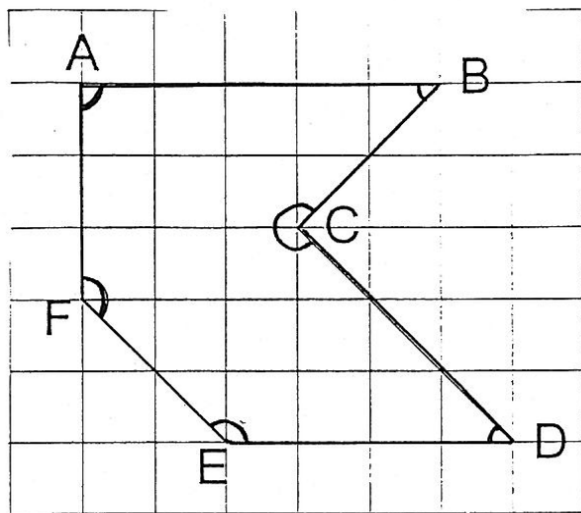
---

22. Circle two numbers with a difference of **6**

**-4   -3   -2   -1   0   1   2   3   4**

(2)

23. Here is a shape on a grid



For each sentence, put a **tick** if you think it is **true**  
Put a **cross** if it is **not** true.

Angle A is an acute angle.

.....

Angle F is an obtuse angle

.....

Line BC is parallel to line CD

.....

Line AB is perpendicular to line DE

.....

.....(4)

24. The temperature in Glasgow is  $-5^{\circ}\text{C}$ . The temperature in Ashford is  $-1^{\circ}\text{C}$ . Which town is colder?

Answer.....(2)

25. Draw rings round any numbers, which are between 6.5 and 7.4.

6.95    6.43    6.54    7.45    7.04    6.05    7.35

(2)

---

26. John has to travel 200 miles to get to his destination.  
He stops for a drink after completing 30% of his journey. How many miles has he completed?

Answer..... (2)

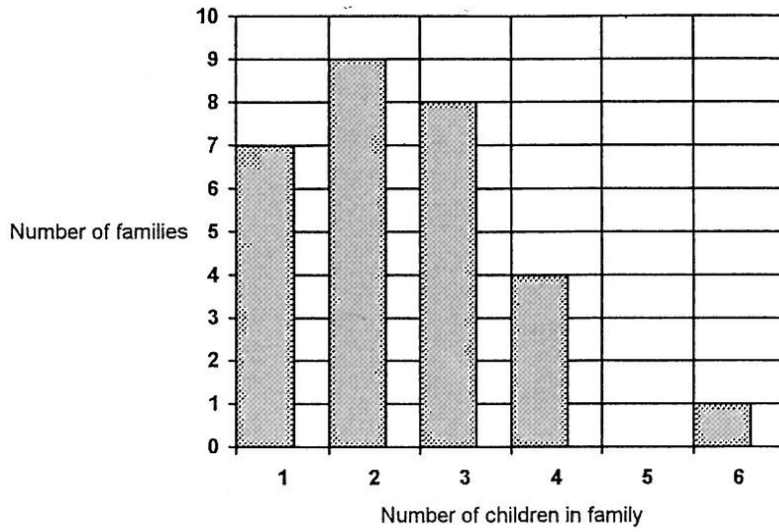
---

27. Team A took part in a quiz and scored 60 points. Three fifths of team A's points were scored by Jane. How many points did Jane score?

Answer.....(2)

28. Joe has one brother and sister. This means that there are three children in his family. He has done a survey of his class to find the number of children in each family.

The number of children in each family



- a) How many families have just one child? ..... (1)
- b) Which number of children in family occurs most often? .....(1)
- c) How many families have five children? .....(1)
- d) How many families were in the survey? .....(2)
  
- e) What fraction of the families had four children? .....(1)





29. This table shows how five children spend their pocket money.

	<b>Mark</b>	<b>Tim</b>	<b>Wendy</b>	<b>Tina</b>	<b>Fred</b>
<b>drinks</b>	£1.50	£2.50	£4.00	£3.50	£1.50
<b>sweets</b>	£1.50	£2.00	£2.50	£2.50	£1.50
<b>magazines</b>	£2.00	£1.50	£3.00	£4.50	£7.00
<b>hobbies</b>	£2.50	£3.00	£1.50	£2.50	£6.50

a) How much does Tim spend on drinks?

Answer: ..... (1)

b) Who spends £6.50 on hobbies?

Answer: ..... (1)

c) How much more does Wendy spend on drinks than Fred?

Answer: ..... (1)

d) Which children spend less than Tim on sweets?

Answer: ..... (1)

e) How much pocket money does Mark get?

Answer: ..... (1)

f) Which child gets a total of £13.00 pocket money?

Answer: ..... (1)

**End of Test**