The King's School
and
The Junior King's School
Canterbury

Entrance Examinations 2011
(11+)

MATHEMATICS

45 minutes

There are two sections: one multiple choice, and one requiring written answers.

<u>Timing</u>: you should allow about 30 minutes of time for section A and 15 minutes for section B.

<u>Multiple choice sections</u>: ring clearly the correct answer (one in each question).

CALCULATORS ARE <u>NOT</u> ALLOWED

NAME: ..... AGE: .....

PRESENT SCHOOL: .....

Total ..... % .....

***Written Section**: write your working and answers on the paper in the spaces provided. Show all working.*

1) Do the following sums

a) 696
+ 555

_____

b) 603
- 447

_____

2) Work out the following:

a) 57
× 26

_____

b)
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      _____
   4 | 1056
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3) Work out the following:

a) 0.34 + 4.95

_____

b) 7.5 - 1.8

_____

c) 1.1 × 1.2

_____

4) Write all the factors of 36

Factors are :.....

5) Write the following numbers in order of size, from smallest to largest:

⅔ , 60% , 0.57, 0.06, 0.618

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6) I think of a number. I multiply it by 5, add seven, and divide by four. I now have 8. What was the number I first thought of?

_____

7) A CD player is worth $640
Find 10% of this.

_____

What is 15% of $640

_____

8) What are the next <u>two</u> terms in the following sequence?

2, 3, 5, 8, 13, …

_____ _____

9) Calculate the answers to the following fraction calculations:

a) $7\frac{3}{8} + 6\frac{3}{5}$

_____

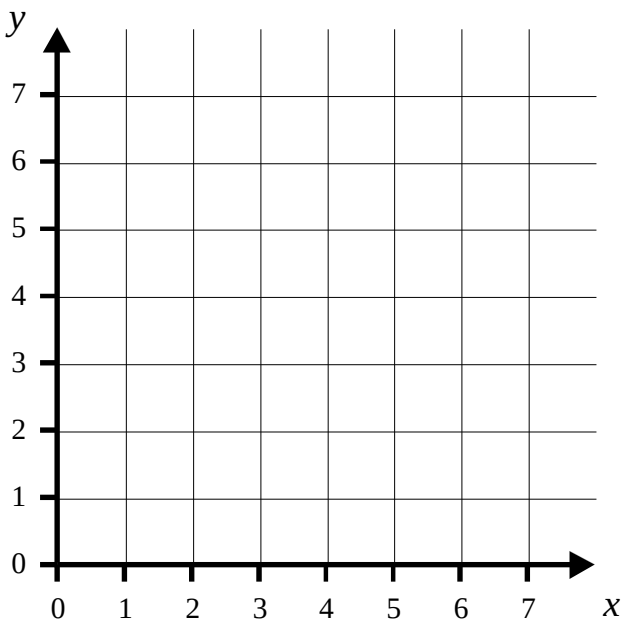
b) $4\frac{1}{2} - 1\frac{2}{5}$

_____

10) Plot the following co-ordinates on the grid below.

P (2 , 2) Q (6 , 2) R (4 , 7)

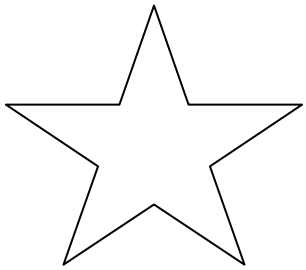
Join the 3 points to form the shape PQR

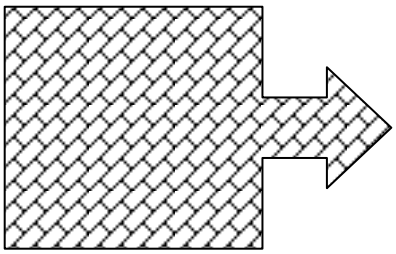


What is the **best** name of this type of triangle?

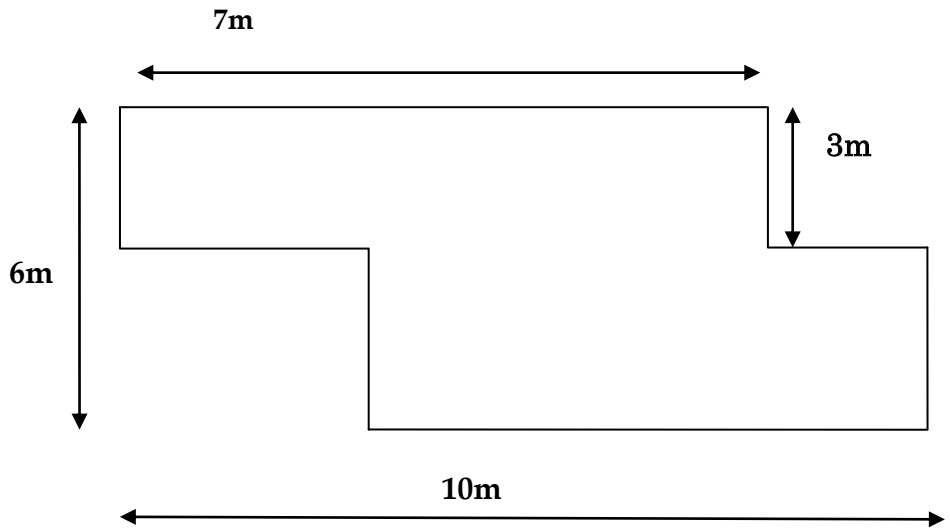
_____

11) a) Draw any lines of symmetry on the following shapes





12) a) What is the perimeter (distance around)the shape below?



Not drawn to scale

Perimeter_____m

13) Six teams took part in a mathematics quiz.
Their scores are as follows:

18, 25, 26, 14, 27, 16,

Work out the mean (average) score.

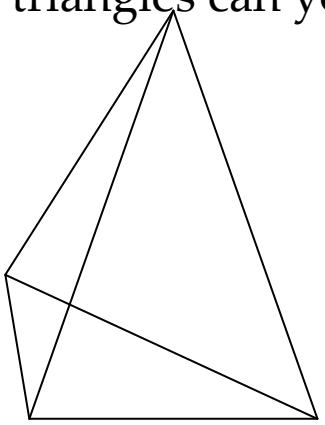
14. What is the value of the letters A B and C ? The row and column totals are shown.

			Row total
B	**B**	**C**	53
A	**C**	**C**	31
B	**A**	**C**	38
Column Total 45	38	39	

A = …… B = …….. C= …….

15. In a class of 28 children, 11 had Game Boys, 17 had watches. If 8 had both, how many had neither?

16. How many triangles can you see in this diagram?



END OF SECTION A

Number Patterns: Ring the next number in the series – think about how to get from the first number to the second.
Each question has a new rule.
Circle the correct answer in each case.

Example

[3 → 4] [12 → 13] [6 → ?] answer.... (a) 4 (b) 5 (c) 6 (d) 7 (e) 8

1) [9 → 3] [12 → 4] [27 → ?] **answer...** (a) 5 (b) 9 (c) 13 (d) 19 (e) 21

2) [5 → 13] [11 → 19] [6 → ?] **answer...** (a) 9 (b) 12 (c) 14 (d) 16 (e) 18

3) [3 → 8] [4 → 10] [2 → ?] **answer...** (a) 3 (b) 4 (c) 6 (d) 7 (e) 8

4) [4 → 15] [3 → 12] [5 → ?] **answer...** (a) 14 (b) 15 (c) 16 (d) 18 (e) 20

Number Series: work out which number comes next in the following sequences of numbers. Circle the correct answer in each case.

Example

2 4 6 8 10 → **answer...** (a) 6 (b) 8 (c) 12 (d) 16 (e) 20

1) **5 4 6 5 7** → **answer...** (a) 2 (b) 4 (c) 6 (d) 8 (e) 10

2) **4 5 8 13 20** → **answer...** (a) 25 (b) 26 (c) 27 (d) 28 (e) 29

3) **6 8 11 5 7 10** → **answer...** (a) 2 (b) 4 (c) 6 (d) 8 (e) 12

Equation Building: in each question, use all the given numbers and signs once to make one of the numbers in the given answers. Circle the correct answer in each case.

Example

5 6 2 × ÷ → **answer...** (a) 3 (b) 5 (c) 10 (d) 12 (e) 15

1) **2 3 4 + -** → **answer...** (a) 0 (b) 2 (c) 4 (d) 5 (e) 7

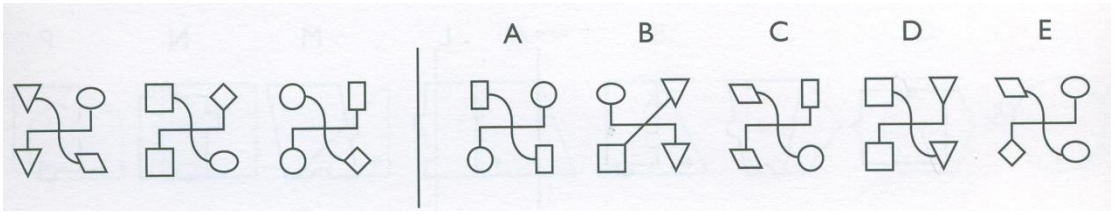
2) **2 5 8 × ÷** → **answer...** (a) 2 (b) 5 (c) 10 (d) 20 (e) 40

3) **9 9 9 + -** → **answer...** (a) 0 (b) 3 (c) 9 (d) 18 (e) 27

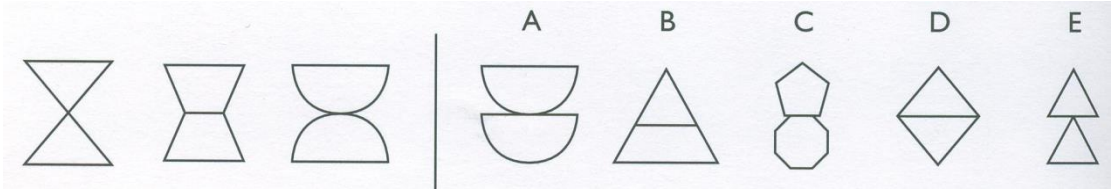
4) **2 5 5 8 × ÷ ÷** → **answer...** (a) 2 (b) 4 (c) 5 (d) 10 (e) 40

Figure Classification: **Choose a shape from the right hand side (with letters) which follows the same rule as the first three shapes(without letters)**
<u>Circle one shape as your answer</u>.

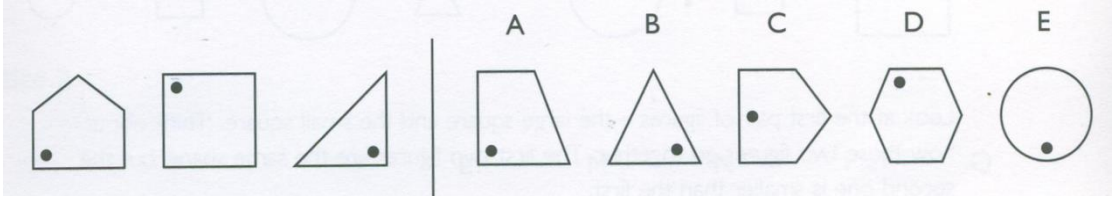
1)



2)



3)



Ring the correct answer to each of the questions below

1. The first day of the summer holiday is 3th July 2010 and the children go back to school on 11th September 2010. How many days' holiday is this?

   a) 70 b) 71 c) 72 d) 73 e) 74

2) If a number is divisible by 66 then it must also be divisible by

   a) 5 and 3 b) 3 and 11 c) 9 and 4 d) 6 and 6

END OF MULTIPLE CHOICE SECTION