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

Entrance Examinations (12+) 2013

MATHEMATICS

45 minutes

INSTRUCTIONS

- Read each question carefully
- All working out must be shown on this paper in the spaces provided
- Marks WILL be awarded for neat and appropriate working
- Ensure that you leave time at the end to check your work
- The marks for each question are shown in brackets on the right of each page

CALCULATORS ARE NOT ALLOWED

NAME: .....

PRESENT SCHOOL: .....

Q1) Andy walks for 653 metres and then scooters for 187 metres. How far does he travel in total?

…… (2 marks)

Q2) Billy has 2845 shares. He sells 527 of them. How many shares has he got left?

……..(2)

Q3) Cyril wishes to buy 6 sets of golf clubs. How much does he spend if each set of golf clubs costs £375?

……..(2)

Q4) There are 1845 Fizzy Cola Bottles to be shared between 5 children. How many Fizzy Cola Bottles will each child receive?

……..(2)

Q5) Simplify the following:

(a) $4a + 5a + 2a$

..... (2)

(b) $5b + 2c + 3b + 3c$

..... (2)

(c) $4f \times 2f$

..... (2)

(d) $(6g)^2$

..... (2)

Q6) Calculate the following giving your answers in their lowest terms:

(a) $\frac{3}{4} + \frac{1}{8}$

.....(2)

(b) $\frac{5}{6} - \frac{1}{4}$

.....(2)

Q7) Work out the following:

(a) 103.73 + 56.82 + 1.85

……..(2)

(b) 512.5 – 34.83

……..(2)

(c) 56.5 × 1.4

……..(3)

Q8) Multiply out the brackets:

(a) 4(a + 6)

……..(2)

(b) −6(2d + e)

……..(2)

Q9) Place each of the numbers from 1 to 10 inclusive into the correct section of the table below:

	PRIME	NOT PRIME
ODD		
EVEN		

(4)

Q10) Convert $\frac{3}{5}$ into a decimal

……..(2)

Q11) Convert 0.25 into a fraction given in its lowest terms

……..(2)

Q12) Convert $\frac{19}{25}$ into a percentage

……..(2)

Q13) Insert the correct operation signs (+ - × or ÷) and brackets to make the following calculations correct. Signs and brackets may be used more than once:

(a) 5 6 2 = 22 (2)

(b) 8 2 8 2 = 24 (2)

Q14) Find the mean of these numbers:

4 6 7 9 5 8 4 2 3 5

……(2)

Q15) Solve the equation $4n + 7 = 35$

……(2)

Q16) Andy is 12 years younger than his sister. The sum of their ages is 30. Find Andy's age.

……(2)

Q17) Write the following numbers as products of their prime factors, using indices where appropriate:

(a) 36

……..(3)

(b) 90

……..(3)

(c) 720

Q18) Find the highest common factor of 36 and 90 (*hint - it may help to use your answers to Q17*).

……..(3)

Q19) Factorise the following expressions:

(a) $4x + 6y$

……..(2)

(b) $15p + 20pq + 25p^2$

……..(2)

Q20) Calculate the following:

(a) $\frac{3}{10}$ of £538

£……..(2)

(b) 25% of $1260

$……..(2)

Q21) Bert scores 45% in an exam having gained a total of 27 marks. How many marks would Bert have scored hag he got all of the questions in the exam correct (in other words, if he had scores 100%)?

.....(2)

TOTAL = 70 MARKS