

NAME:

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PLEASE NOTE:

- Questions must be answered on the question paper in the blocks provided.
- Read the questions carefully.
- You may **not** use a calculator.
- Learners may write as individuals or pairs.
- Learners must print their names on the top of this paper.
- Have fun!



Please circle the correct letter for questions 1-10 and fill the answers in the blocks provided for questions 11-25. Each question is worth 1 mark unless stated otherwise.

1) Calculate

$$862 + 49$$

- a) 901 b) 1011 c) 911 d) 1111 e) 1121

2) Find the 5th number in the sequence 1; 4; 9; 16;

- a) 28 b) 25 c) 32 d) 31 e) 29

3) Which is the greatest number?

- a) 0,035 b) 0,305 c) 0,350 d) 3,500 e) 3,050

4) A light flashes every 9 minutes and a whistle sounds every 7 minutes. If the light flashes as the whistle sounds, after how many minutes will both occur at the same time?



- a) 7 b) 9 c) 16 d) 54 e) 63

5) A shop has 12 tricycles, 6 bicycles and 2 unicycles. How many wheels are there altogether?

- a) 58 b) 60 c) 46 d) 50 e) 52

6) Which of the numbers below **is not** a prime number?

- a) 17 b) 51 c) 47 d) 83 e) 71

7) The sum of two numbers is 14. Which of the choices below **cannot** be a possible product of these two numbers?

- a) 40 b) 48 c) 49 d) 45 e) 36

8) A photo of 8 cm × 6 cm is enlarged to 40 cm × 30 cm. The dog's tail in the smaller photo is 1,5 cm long. How long is his tail in the larger photo?



- a) 55cm b) 65 cm c) 6,5 cm d) 7,5 cm e) 75 cm

9) The 4-digit number 1CC4 is divisible by 9. What digit does C represent?

- a) 2 b) 3 c) 4 d) 5 e) 6

10) 3 monkeys take 24 minutes to eat 12 bananas (eating at the same rate). How many minutes would it take 6 monkeys to eat 6 bananas?

- a) 6 b) 8 c) 10 d) 12 e) 14

11) \otimes is an alien maths operation. Below are examples of sums with their results.

$$4 \otimes 7 = 25 \qquad 7 \otimes 9 = 60$$

$$1 \otimes 9 = 6 \qquad 3 \otimes 8 = 21$$

What is the result of $8 \otimes 5$?

12) If the Quality Quartet can play Beethoven's 9th Symphony in 12 minutes, how will it take the Terrific Trio to play it?

13) If $P \uparrow$ and $P \downarrow$ are defined by the equations

$$P \uparrow = P + 2$$

$$P \downarrow = P - 2$$

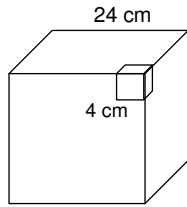
Calculate $((5 \uparrow) \times (2 \downarrow)) \uparrow$

14) If the pattern in the table is continued, what number should replace Q?

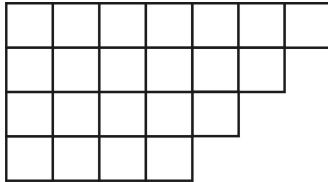
1	2	3	4	5	...	10
6	11	16	21	26	...	Q

15) When my mother was 35, I was 11. Now she is twice as old as I am. How old am I?

16) How many of the small cubes fit exactly into the large cube?



17) How many squares are in the diagram below?



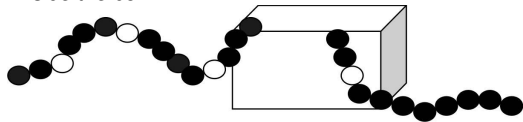
18) I flip two coins, without letting you see the outcome, and I tell you that at least one of the coins came up heads, what is the probability that the other coin is also heads?

19) What number comes next in the number pattern below?

64; 16; 4; 1; $\frac{1}{4}$; ?

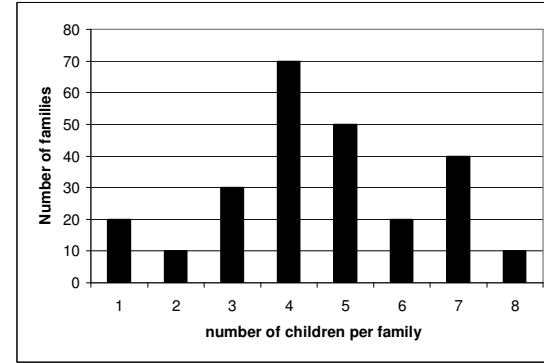
20) In maths, ! means factorial. Here are 2 examples of how it works:
 $4!$ means $4 \times 3 \times 2 \times 1$
 $6!$ means $6 \times 5 \times 4 \times 3 \times 2 \times 1$
 Calculate: $\frac{2007!}{2006!}$

21) The string of beads below, was made according to a certain pattern. How many beads are hidden inside the box?



22) A teacher has enough sheets of paper to give each learner in the class 3 sheets and have 36 sheets left, or to give each learner 4 sheets and have 15 sheets left. How many sheets of paper does she have?

23) Trulyville is a lovely town. The graph below shows the results of a recent survey of the 250 families living in this town. Using the graph below, what is the total number of children living in Trulyville?



24) If $7 \nabla 3 = (7 \times 5) - (3 \times 2)$, calculate $(3 \nabla 1) \nabla 2$

25) $6\frac{1}{2}\spadesuit = 8\heartsuit$ and $3\spadesuit = 2\heartsuit$.
 How many \spadesuit do you need to equal $39\spadesuit$?

Paper written by Steve Sherman

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