SAMPLE QUESTIONS FOR MATHEMATICS COMPETITION

AGE CATEGORY: LITTLE BEE (9-11 Years old)

## Question 1

Which of the following statements is false?

| A | B | C | D |
| :---: | :---: | :---: | :---: |
| 42 is a multiple of 2 | 43 is a multiple of 3 | 44 is a multiple of 4 | 45 is a multiple of 5 |

## Question 2

$\mathrm{XYZ5}$ is a four-digit number.
Given that $X Y Z 5 \times 3=28 X Y Z$, find the value of $X+Y+Z$.

| A | B | C | D |
| :---: | :---: | :---: | :---: |
| 16 | 20 | 28 | 30 |

## Question 3

Two three-digit numbers are added:

$$
\begin{array}{r}
x y z \\
+\quad z y x \\
\hline 1817
\end{array}
$$

Calculate the value of $x+y+z$.

| A | B | C | D |
| :---: | :---: | :---: | :---: |
| 17 | 19 | 21 | 22 |

## Question 4

The area of a square is twice its perimeter. Find the length of a side of the square.

| A | B | C | D |
| :---: | :---: | :---: | :---: |
| 2 | 4 | 5 | 8 |

Each letter has a different numerical value between 1 and 6 . Find the value of CRAB.

$$
\begin{aligned}
& C+A+T=6 \\
& B+A+T=7 \\
& R+A+T=8 \\
& C+O+B+R+A=20
\end{aligned}
$$

$$
C+R+A+B=?
$$

| A | B | C | D |
| :---: | :---: | :---: | :---: |
| 10 | 12 | 13 | 14 |

## Question 6

How many rectangles are there in the diagram below?


| A | B | C | D |
| :---: | :---: | :---: | :---: |
| 32 | 27 | 21 | 18 |

## Question 7

The points $A, B, E$ and $F$ and points $B, C, D$ and $E$ form the vertices of two squares, as shown in the image below.
How many different right-angled triangles can be drawn by connecting three dots in the image below?


Figure 2 is 9 cm long. Figure 7 is 24 cm long. How long is figure 70 ?

2. $\square \square$
3. $\square \square \square$
4. $\square \square \square \square$

| A | B | C | D |
| :---: | :---: | :---: | :---: |
| 213 | 221 | 232 | 245 |

## Question 9

A sheet of paper is 0.01 mm thick. It is folded ten times. How thick is the paper after being folded ten times?

| A | B | C | D |
| :---: | :---: | :---: | :---: |
| 1.28 mm | 2.56 mm | 5.12 mm | 10.24 mm |

## Question 10

Which number fits into the pattern below?
$\begin{array}{lllll}4 & 8 & 20 & x & 164\end{array}$

| A | B | C | D |
| :---: | :---: | :---: | :---: |
| 38 | 40 | 48 | 56 |

Today is Friday. What day will it be in 40 days' time?

| A | B | C | D |
| :---: | :---: | :---: | :---: |
| Monday | Tuesday | Wednesday | Thursday |

## Question 12

$2701 \times 0.3=810.3$
What is the value of $270100 \times 0.003 ?$

| A | B | C | D |
| :---: | :---: | :---: | :---: |
| 81030 | 8103 | 810.3 | 81.03 |

The distance between $\frac{1}{2}$ and $\frac{4}{3}$ is divided into four equal parts, as shown in the diagram below. Which number should come in the place of C ?


| A | B | C | D | E |
| :---: | :---: | :---: | :---: | :---: |
| $\frac{8}{9}$ | $\frac{3}{2}$ | $\frac{22}{24}$ | $\overline{9}$ | $\frac{5}{6}$ |

## Question 15

How many squares can be formed from the diagram below?

| A | B | C | D | E |
| :---: | :---: | :---: | :---: | :---: |
| 5 | 7 | 9 | 11 | None of these |

## Question 16

Determine the result of the following calculation:

$$
2018-2017+2016-2015+2014-2013+\cdots+4-3+2-1
$$

| A | B | C | D | E |
| :---: | :---: | :---: | :---: | :---: |
| 0 | -1 | 1 | -1009 | 1009 |


|  |  |  |  |
| :--- | :--- | :--- | :--- |
|  |  |  |  |

In a football match, the winning team receives three points, the losing team scores no point, and if the match results in a draw, then each team gets one point. A team has achieved 80 points after 38 games. What is the greatest number of games this team could have lost?

| A | B | C | D | E |
| :---: | :---: | :---: | :---: | :---: |
| 9 | 10 | 11 | 12 | 13 |

## Question 19

The figure below shows four equal squares and one small square, with the total area of $333 \mathrm{~cm}^{2}$. What is the area of the small square? (Hint: All lengths are integers).


| A | B | C | D | E |
| :---: | :---: | :---: | :---: | :---: |
| $1 \mathrm{~cm}^{2}$ | $4 \mathrm{~cm}^{2}$ | $9 \mathrm{~cm}^{2}$ | $16 \mathrm{~cm}^{2}$ | $25 \mathrm{~cm}^{2}$ |

## Question 20

Jeremy wants to know how old his father is. His father says to him: "Subtract from my age the half of your age. The answer to this is five times half of your age". Given this, how many times is the father older than Jeremy?

| A | B | C | D |
| :---: | :---: | :---: | :---: |
| Twice | Three times | Four times | Five times |

