

10/1 Put a circle round the correct answer:

4 children substituted the number 2 for x in the following equation.

$$5y = 3(8+x)$$

The correct value for y is:-

- a) 30 b) 8 c) 6 d) 2

10/2 How long would it take to count to a million if you counted once every second?

10/3 My tortoise Bob is 81 years and 81 months and 81 weeks and 81 days old. How old will he be next birthday?

10/4 Use only + or – in-between these numbers **1 2**
3 =
 Find all the different totals you can make and add them.
 State this sum.

10/5 This is a completed 5-box.

1	4	5	9	14
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Complete the second 5-box

1				32
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10/6 Write the number 4376 as the product of prime numbers.

10/7 Find the difference between 2^{2^2} and 3^{3^3}

10/8 Three friends are digging up potatoes. Ravi and Ray dig up 22kg, Ravi and Robert dig up 25kg and Ray and Robert dig up 27kg. How much did they each dig up?

10/9 Take the coordinate (3, 4).
 Reflect it in both the x and y axis and join to form a right angled triangle.
 Find the perimeter of this triangle.

10/10 In a theatre seating 450 people there is to be a fund-raiser. An adult can take a child for free. If half the adults bring a child and pay \$10 for a ticket, how much will be taken at the door?

- 10/11** Usain Bolt has run the 100 metres in 9.86 seconds. What is his speed in kilometres per hour?
- 10/12** I have a regular pack of playing cards with some of the cards missing. If the probability of picking a red is three sevenths, what is the maximum number of cards which could be in this pack?
- 10/13** Two square play mats are placed side by side to form a rectangular shape. The perimeter of this new shape is numerically equal to the area of the two play mats. Find the value of the side length of one mat.
- 10/14** In a small Mathex competition in a school, it was noted that 90% of the teams answered the first question correctly and 40% of the teams got the second question wrong. All the teams got at least one of these questions correct and ten teams solved both of them. How many teams were there in this Mathex competition?
- 10/15** A cuboid has dimensions 6cm by 8cm by 10cm. It is made up of separate cubic centimeter cubes. If the cuboid is dipped in paint and then taken apart, what is the probability that any cube chosen at random has no paint on any sides?
- 10/16** $89 \rightarrow 72 \rightarrow 14 \rightarrow 4$. 89 has a PERSISTENCE NUMBER of 3
[3 steps to reduce to a single digit].
Find the number between 70 and 79 with a persistence digit of 4.
Write out the sequence of 4 steps.
- 10/17** If you add the digits in a number, how many numbers between 20 and 200, add to 13?
- 10/18** Factors of 6 are 1, 2, 3, 6.
Factors of 10 are 1, 2, 5, 10
Find the smallest number with exactly 7 factors.
- 10/19** A piece of paper 10cm by 15cm is made into an open-ended cylinder by putting the longer edges together and then another open-ended cylinder by putting the shorter sides together. Find the difference in volume of these two cylinders.
- 10/20** Twenty pieces of metal fencing, one metre in length, are placed together to enclose first a square area and then the largest area it can

enclose using a 20 sided polygon shape. How much more area is enclosed in this second shape?