Below are some of the questions taken from this years Maths challenge - I have put the answers at the bottom.

**2.** How many of the following five options are factors of 30?

A 1

B 2

C 3

D 4

E 5

**9.** Triangle LMN is isosceles with LM = LN.

What is the value of y?

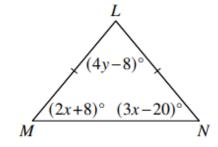
A 15

B 17

C 19

D 21

E 23



13. Four congruent rectangles are arranged as shown to form an inner square of area 20 cm<sup>2</sup> and an outer square of area 64 cm<sup>2</sup>.

What is the perimeter of one of the four congruent rectangles?

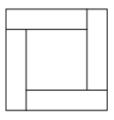
A 6cm

B 8 cm

C 9.75 cm

D 16 cm

E 20 cm



**15.** My train was scheduled to leave at 17:48 and to arrive at my destination at 18:25. However, it started four minutes late, and the journey took twice as long as scheduled.

When did I arrive?

A 19:39

B 19:06

C 19:02

D 18:29

E 17:52

21. Eleanor's Elephant Emporium has four types of elephant. There are twice as many grey elephants as pygmy elephants, three times as many white elephants as grey elephants and four times as many pink elephants as white elephants. There are 20 more white elephants than pygmy elephants.

How many elephants are in Eleanor's Emporium?

A 123

B 132

C 213

D 231

E 312

25. Granny gave away her entire collection of antique spoons to three people. Her daughter received 8 more than a third of the total; her son received 8 more than a third of what was then left; finally her neighbour received 8 more than a third of what was then left.

What is the sum of the digits of the number of spoons which were in Granny's collection?

A 14

B 12

C 10

D 8

E 6