

**Age 11+ Level ★★
Worksheet 2****1. Multiple Choice**

In a multiple choice exam, each candidate scores 4 points for every correct answer and loses 1 point for every incorrect answer.

Sarah answers all 100 questions and gets a score of 210 marks.
How many questions did she answer correctly?

2. Adding Tricky Fractions

Can you find the sum without using a calculator?

$$\frac{1}{7} + \frac{1}{8} + \frac{1}{9} + \frac{1}{10} + \frac{1}{11} + \frac{1}{12} + \frac{1}{14} + \frac{1}{15} + \frac{1}{18} + \frac{1}{22} + \frac{1}{24} + \frac{1}{28} + \frac{1}{33}$$

3. See Axes

Each letter in this sum represents a different non-zero digit.

Which digit does X represent?

$$\begin{array}{r} \text{S E E} \\ + \text{S E E} \\ \hline \text{A X E S} \end{array}$$

4. ABC Addition

In this addition, a , b and c each represent a single digit.

What number does abc represent?

$$\begin{array}{r} a b c \\ + a c b \\ \hline c 4 a \end{array}$$

5. Palindromic Milometer

When he began his three hour drive, Alan's milometer reading was 29792 miles, a palindromic number.

At the end of Alan's journey, his milometer reading was another palindromic number.

Given that Alan never broke the speed limit of 75 miles per hour, what was his greatest possible average speed?

These problems are adapted from UKMT (ukmt.org.uk) and WMC (competition.ac) problems.