

Primary Puzzle Page – Solutions

(All problems are taken from 'Graded Problem-Solving Cards' – Years 1-6 TTS)

Year 1:

I think of a number. I halve it. My answer is 7.

What is my number?

14

How could you prove it?

Use concrete resources.

Year 2:

Would you rather have $\frac{1}{2}$ of a bag with 6 sweets in it or $\frac{1}{4}$ of a bag with 8 sweets in it? Why?

Explain your thinking.

$\frac{1}{2}$ of 6 sweets = 3 sweets

$\frac{1}{4}$ of 8 sweets = 2 sweets

I would rather have $\frac{1}{2}$ of a bag of 6 sweets because I would get more.

Year 3:

A tube of sweets has 5 orange, 7 red, 5 green, 4 yellow, 6 brown and 3 blue sweets.

What fraction of the sweets is blue?

$\frac{3}{30}$ or $\frac{1}{10}$ of the sweets are blue

How could you prove it?

Draw a bar model.

Year 4:

Sarah's Gran gave her a large bar of chocolate. On Monday she ate $\frac{3}{9}$ of the bar and on Tuesday she ate $\frac{4}{9}$ of the bar. **Was it possible for her to eat $\frac{5}{9}$ of the bar on Wednesday?**

$\frac{3}{9} + \frac{4}{9} + \frac{5}{9} = \frac{12}{9}$ which is one whole bar and $\frac{3}{9}$. There would only be $\frac{2}{9}$ of the bar left for her to eat on Wednesday.

Year 5:

In a pie eating competition, Luke eats 2 and $\frac{3}{4}$ of his pies while Matt eats $\frac{20}{8}$ of his pies.

Who won the competition? Luke

How could you prove it?

$\frac{20}{8} = 2$ and $\frac{4}{8}$ or 2 and $\frac{1}{2}$ which is less than 2 and $\frac{3}{4}$. Draw a bar model.

Year 6:

$\frac{1}{3}$ of the coins in my purse are 50 pences, $\frac{1}{6}$ are 10 pences and I also have three 20 pences, two 5 pences and a £1 coin.

How many coins are in my purse?

12 coins

How much money is in my purse?

£3.90