

Year 6 Reasoning and problem solving challenge questions – Percentages (Week 4)

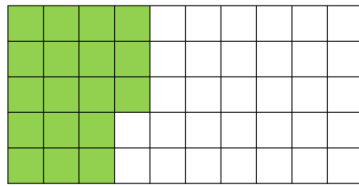
1. In a Maths test, Tommy answered 62% of the questions correctly.

Rosie answered $\frac{3}{5}$ of the questions correctly.

Who answered more questions correctly?

Explain your answer.

- 2.



Amir thinks that 18% of the grid has been shaded.

Dora thinks that 36% of the grid has been shaded.

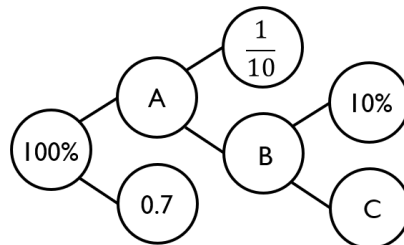
Who do you agree with?

Explain your reasoning.

3. Amir says 0.3 is less than 12% because 3 is less than 12

Explain why Amir is wrong.

4. Complete the part-whole model.
How many different ways can you complete it?



Can you create your own version with different values?

5. How many different fractions can you make using the digit cards?



How many of the fractions can you convert into decimals and percentages?

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6. In his first Geography test, Mo scored 38%

In the next test he scored $\frac{16}{40}$

Did Mo improve his score?

Explain your answer.

7. Which month did Eva save the most money?
Estimate your answer using your knowledge of fractions, decimals and percentages.
Explain why you have chosen that month.

In January, Eva saves $\frac{3}{5}$ of her £20 pocket money.



In February, she saves 0.4 of her £10 pocket money.



In March, she saves 45% of her £40 pocket money.



8. Mo says,

To find 10% you divide by 10, so to find 50% you divide by 50



Do you agree? Explain why.

9. Complete the missing numbers.

$$50\% \text{ of } 40 = \underline{\quad\quad} \% \text{ of } 80$$

$$\underline{\quad\quad} \% \text{ of } 40 = 1\% \text{ of } 400$$

$$10\% \text{ of } 500 = \underline{\quad\quad} \% \text{ of } 100$$

10. What percentage questions can you ask about this bar model?

