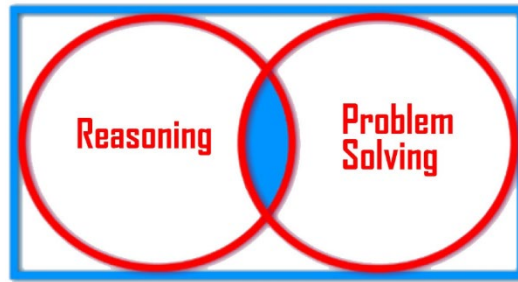


GCSE Foundation (5 – 1)



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Mathematical Reasoning Questions (Fractions, Decimals and Percentages) – Set 1 Solutions

The questions are repeated here for your convenience

<p>1</p>	<p>Choose the calculations which represent 5% of half of £552?</p> <p>a) $0.5 \times \frac{1}{2} \times 552$ b) $0.05 \times 0.5 \times 552$ c) $\frac{1}{20} \times 0.5 \times 552$ d) $\frac{1}{2}$ of 5% of 552</p> <p><u>Solution</u> $5\% = 0.05 = \frac{1}{20}$ Correct Answers: B and C [2Marks]</p>
<p>2</p>	<p>Choose the calculations which will give an answer equal to 2.015</p> <p>a) $2 + \frac{1}{10} + \frac{5}{100}$ b) $2 + \frac{1}{100} + 0.0015$ c) $3 - 0.9 - 0.085$ d) $2 + 0.01 + \frac{1}{200}$</p> <p><u>Solution</u> Correct answers: C and D [2Marks]</p>
<p>3</p>	<p>Complete the calculation below by filling in the missing number</p> $5 + \frac{2}{5} - 0.5 - \square = 5.5$ <p><u>Solution</u> $\frac{2}{5} = 0.4$ Therefore, we have $5 + 0.4 - 0.5 = 4.9$</p> <p>So $4.9 - \square = 5.5$ $\square = 4.9 - 5.5 = -0.6$</p> <p>Hence, the correct calculation will be</p> $5 + \frac{2}{5} - 0.5 - \boxed{-0.6} = 5.5 \quad \text{[2marks]}$

4	<p>Work out $(73\% + \text{fifty three hundredths} - 0.08)$</p> <p><u>Solution</u> $73\% = 0.73$ Fifty-three hundredths = 0.53 Therefore, we have $0.73 + 0.53 - 0.08 = 1.18$ [2marks]</p>
5	<p>Given that $x > 0.7$ and $y < \frac{2}{5}$, find the median of the numbers below</p> <p style="text-align: center;">$0.406, \quad y, \quad x, \quad \frac{3}{5}, \quad 0.4$</p> <p><u>Solution</u> Arrange the numbers from the smallest to largest $\frac{3}{5} = 0.6$ since $x > 0.7$ it means that x is the largest of the numbers $\frac{2}{5} = 0.4$ since $y < \frac{2}{5}$ it means that y is the smallest of all the numbers Therefore, the number will be arranged as follows $y, 0.4, 0.406, \frac{3}{5}, x$ Therefore, the median of the numbers will be 0.406 [2Marks]</p>
6	<p>If $a = 0.1$ and $b = \frac{1}{5}$ Which of the following is True? Choose all the correct answers</p> <p>a) $b > b^2$ True b) $a > b$ False c) $a = b$ False d) $a < b$ True</p> <p style="text-align: right;">[4Marks]</p>

7

Complete the table below.

All the variables are single digit whole numbers

Solution

Fraction	Decimal	Percentage
$\frac{a}{10}$	0.a	10a%
$\frac{x}{100}$	0.0x	x%
$\frac{yz}{100}$	0.yz	yz%

[3Marks]

8

What number lies exactly half-way between $\frac{1}{2}$ and $\frac{1}{3}$.

Choose one answer

a) $\frac{5}{6}$

b) $\frac{5}{12}$

c) $\frac{1}{5}$

d) $\frac{6}{5}$

Solution

$$\frac{1}{2} + \frac{1}{3} = \frac{5}{6}$$

$$\frac{5}{6} \div 2 = \frac{5}{6} \times \frac{1}{2} = \frac{5}{12}$$

Correct Answer: B

[2Marks]

9



Choose a number between 0.2 and 0.3 to make the calculation shown below correct

$$0.3 + (5 \times \square) - 0.6 = 1$$

Solution

{Add 0.6 to both sides}: $0.3 + (5 \times \square) = 1.6$

{Subtract 0.3 from both sides}: $(5 \times \square) = 1.3$

{Divide both sides by 5}: $\square = 1.3 \div 5 = \frac{13}{50}$

Therefore, $\square = 0.26$

[2Marks]

10

Write down the three fractions which will add up to make 0.541
Give your answers in their simplest form

Solution

$$0.541 = \frac{1}{2} + \frac{1}{25} + \frac{1}{1000} \quad \text{[1mark]}$$