

Enterprising Mathematics

QUESTION 2

RELAY ROUND

What is the value of $((1 + 2) + 3) \times 4 \times 5 \div (6 - (7 - 8) \times 9)$

ANSWER

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QUESTION 18

RELAY ROUND

$$a + b = 38, \quad b + c = 44, \quad a + c = 52$$

Determine the value of c .

ANSWER

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QUESTION 4

RELAY ROUND

The mean of the numbers a , b and c is a .
What is the mean of b and c ?

ANSWER

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QUESTION 20

RELAY ROUND

If $52861 \times 894 = 47257734$, what is the value of:

$$47257734 \div 52.861$$

ANSWER

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QUESTION 6

RELAY ROUND

What is the sum of the prime factors of 2010?

ANSWER

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QUESTION 22

RELAY ROUND

A solid wooden cube is painted red on the outside. The cube is then cut into 27 smaller cubes. What fraction of the total surface area of these new cubes is red?

ANSWER

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QUESTION 8

RELAY ROUND

Three tenths of a number is one more than two sevenths of the number.
What is the number?

ANSWER

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QUESTION 24

RELAY ROUND

Five friends call each other every Saturday night to pass on their weekly news about themselves and each other.
What is the least number of calls necessary so that all 5 friends are up to date with the latest chat?

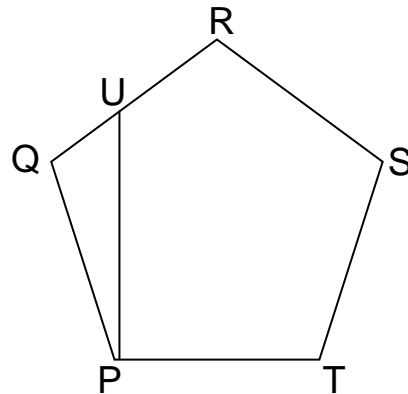
ANSWER

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QUESTION 10

RELAY ROUND

$PQRST$ is a regular pentagon.
 PU is perpendicular to PT .
What is the size of angle QUP ?



ANSWER

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QUESTION 26

RELAY ROUND

Find the value of

$$\left(\frac{7}{14}\left(2.5 \times \frac{4}{20}\right) + 3\frac{6}{8}\right)^2$$

ANSWER

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QUESTION 12

RELAY ROUND

Part of a bridge spans a river 30m wide. 25% of the bridge is on one side of the river and one eighth of the bridge is on the other side. How long is the bridge?

ANSWER

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QUESTION 28

RELAY ROUND

Each letter in the words below represents a number 1, 2, 3, 4, 5, 6, 7, 8 or 9. The values of the letters are multiplied together. If

$$\text{CAR} = 70$$

$$\text{JAR} = 42$$

$$\text{CAT} = 60$$

Find the value of CART

ANSWER

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QUESTION 14

RELAY ROUND

An oil painting with total dimensions 40cm by 30cm includes a 3cm wooden frame on all sides. What percentage of the total area is taken up by the painting itself?

ANSWER

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QUESTION 30

RELAY ROUND

Barry has a market stall. Each morning he buys punnets of strawberries to sell. He sells half of the punnets at £2 each, half of the remainder at £1 each and the rest at three punnets for a pound. He sells all the strawberries and at the end of the day, he has £128.

How many punnets did he buy?

ANSWER

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QUESTION 16

RELAY ROUND

A metal cube has dimensions $8 \times 8 \times 8$ cm. It is cut into smaller cubes with dimensions $2 \times 2 \times 2$ cm.

What is the total length of the edges of all of the 2cm cubes?

ANSWER