

Ratio

Tom distributes \$120 between his kids Pina and Nina in the ratio 4:1. What part will each person get?

Total parts: $4x + 1x =$

$5x = 120$

$x = 120/5$

$x =$

Pina: $4 * 24 =$

Nina: $1 * 24 =$ Or

Nina: $120 - 96 =$

Split 360 gram in 3:6 ratio

Total parts: $3x + 6x =$

$9x = 360$

$x = 360/9$

$x =$

Part one = $3x = 3 * 40 =$

Part two = $6x = 6 * 40 =$ Or

Part two = $360 - 120 =$

Rina runs 3 times as long distance as Tina. The total distance they run is 16 km. What distance does Tina and Rina run individually?

Total parts = $3x + 1x =$

$4x = 16$

$x = 16/4$

$x =$

Rina runs $3 * 4 =$

Tina runs $1 * 4 =$ or

Tina runs $16 - 12 =$

There are 18 pupils in the class. Ratio of boys to girls is 2:1. How many girls and boys are there in the class?

Total parts: $2x + 1x =$

$3x = 18$

$x = 18/3$

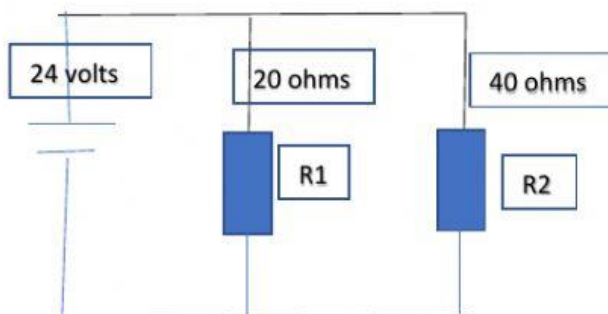
$x =$

Boys: $2 * 6 =$

Girls: $1 * 6 =$ Or

Girls = $18 - 12 =$

Refer to the circuit below and answer the following questions:



A) In the circuit above, find the ratio of the resistors

$$= 40:20$$

$$= 40 / 20$$

$$= 2 / 1 \text{ OR } 2:1$$

B) Find the total parts of the current flowing

$$= 2x + 1x = 3x$$

C) Which resistance will have more current flowing through it?

R1 [Lower the resistance, more current]

D) Find total resistance of the circuit

$$R_T = \frac{1}{\left(\frac{1}{20} + \frac{1}{40}\right)}$$

$$R_T = \frac{1}{\left(\frac{3}{40}\right)}$$

$$R_T = \frac{40}{3}$$

$$R_T = 13.33 \text{ ohms}$$

E) What is the total current flowing through the circuit?

$$I_T = V_T / R_T$$

$$I_T = 24 / 13.33$$

$$I_T = 1.8 \text{ amperes}$$

F) What is the current flowing through R₁?

$$I_{R1} = \frac{V_T}{R_1} = \frac{24}{20} = 1.2 \text{ A}$$

G) What is the current flowing through R₂?

$$I_{R2} = \frac{V_T}{R_2} = \frac{24}{40} = 0.6 \text{ A OR}$$

$$I_{R2} = I_T - I_{R1} = 1.8 - 1.2 = 0.6 \text{ Amperes}$$