Ratios - Practice Exercises Answers

Answer 1

Reduce the following ratios:

No.	Ratios	Answer
1	25:36	This is the simplest form
2	99:27	11:3
3	13:65	1:5
4	7:28	1:4
5	10:70	1:7

Answer 2

Change the ratios into fraction format:

No.	Ratios	Answer
1	13:69	13/69
2	39:87	13/29
3	14:78	7/39
4	12:96	1/8
5	78:13	6/1

Answer 3

Ash's desired chocolate to original donut ratio = 2:6 or 1:3 (reduced)

The first pack has 9 original donuts.

Consider, number of choco donuts to add, 'C'

So,

$$\frac{1}{3} = \frac{C}{9}$$

$$\frac{1}{3} \times 9 = \frac{C}{9} \times 9$$

$$\frac{1}{3} \times 9 = C$$

$C = 3;$ So, Ash needs to add **3 choco donuts** to this pack.

The second pack has 15 original donuts.

Consider, number of choco donuts to add, 'D'

So,

$$\frac{1}{3} = \frac{D}{15}$$

$$\frac{1}{3} \times 15 = \frac{D}{15} \times 15$$

$$D = 5$$

So, Ash needs to add **5 choco donuts** to this pack.

Answer 4

Total mixture=750ml with 50ml of lemon juice.

So, the mixture of water and vinegar is (750-50) ml = 700ml

Let's consider amount of vinegar is 'V'

So, amount of water = (700-V)

So,

$$\frac{700 - V}{V} = \frac{3}{2}$$

$$\frac{(700 - V)}{V} \times 2 = \frac{3}{2} \times 2$$

$$\frac{(1400 - 2V)}{V} \times V = 3 \times V$$

$$1400 - 2V = 3V$$

$$1400 - 2V + 2V = 3V + 2V$$

$$5V = 1400$$

$$5V \div 5 = 1400 \div 5$$

$$\frac{5V}{5} = \frac{1400}{5}$$

$$V = 280$$

So, there is **280mls** of vinegar in the mixture.

Answer 5

Total crayons= 24

Total crayons of Red, Blue, and Yellow = (8+5+4) = 17

So, number of green crayons= (24- 17) = 7

So, Ratio of Red crayons to Green crayons = **8:7**

Answer 6

Let's consider:

Number of blueberry muffins initially = 'B'

Number of white choc muffins initially = 'W'

At the start of the day,

$$\frac{B}{W} = \frac{3}{5}$$

$$\frac{B}{W} \times 5 \times W = \frac{3}{5} \times 5 \times W$$

$$5B = 3W$$

$$5B - 3W = 3W - 3W$$

$$5B - 3W = 0$$

Now, at the end of the day,

Number of remaining blueberry muffins = B-5

Number of remaining white choco muffins = W-27

$$\frac{B-5}{W-27} = \frac{2}{1}$$

$$\frac{B-5}{W-27} \times 1 \times (W-27) = \frac{2}{1} \times 1 \times (W-27)$$

$$B - 5 = 2 \times (W-27)$$

$$B - 5 = 2W - 54$$

$$B - 2W = -54 + 5$$

$$B - 2W = -49$$

$$B = 2W - 49$$

Putting the value of 'B' in the first equation,

$$5B - 3W = 0$$

$5(2W - 49) - 3W = 0$

$10W - 245 - 3W = 0$

$7W - 245 + 245 = 0 + 245$

$7W = 245$

$\dfrac{7W}{7} = \dfrac{245}{7}$

$W = \dfrac{245}{7}$

$W = 35$

So there were **35 white choco** muffins at the start of the day.

We know,

$B = 2W - 49$

$B = 2(35) - 49$

$B = 70 - 49$

$B = 21$

So there were **21 blueberry** muffins at the start of the day.