

EXERCISE 11(D)

Question 1.

Which ratio is greater:

(i) $\frac{8}{15}$ or $\frac{5}{9}$ (ii) $\frac{3}{7}$ or $\frac{6}{13}$

Solution:

(i) $\frac{8}{15}$ or $\frac{5}{9}$
 $\Rightarrow 8 \times 9$ or 15×5
 $\Rightarrow 72$ or 75

Since, $75 > 72$ $\therefore \frac{8}{15}$ is greater.

(ii) $\frac{3}{7}$ or $\frac{6}{13}$
 $\Rightarrow 3 \times 13$ or 7×6
 $\Rightarrow 39$ or 42

Since, $42 > 39$ $\therefore \frac{6}{13}$ is greater.

Question 2.

Which ratio is smaller :

(i) $\frac{9}{17}$ or $\frac{8}{15}$

(ii) $\frac{7}{15}$ or $\frac{15}{32}$

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Solution:

$$(i) \frac{9}{17} \text{ or } \frac{8}{15}$$

$$\Rightarrow 9 \times 15 \text{ or } 17 \times 8$$

$$\Rightarrow 135 \text{ or } 136$$

Since, $135 > 136 \therefore \frac{8}{15}$ is smaller.

$$(ii) \frac{7}{15} \text{ or } \frac{15}{32}$$

$$\Rightarrow 7 \times 32 \text{ or } 15 \times 15$$

$$\Rightarrow 224 \text{ or } 225$$

$$\Rightarrow 224 < 225 \therefore \frac{7}{15} \text{ is smaller.}$$

Question 3.

Increase 95 in the ratio 5 : 8.

Solution:

Given ratio = 5 : 8

The increased quantity = $\frac{8}{5}$ x given quantity

$$= \frac{8}{5} \times 95 = 152$$

Question 4.

Decrease 275 in the ratio 11 : 7.

Solution:

Given ratio = 11 : 7

The decrease quantity = $\frac{11}{7}$ x given quantity.

$$= \frac{11}{7} \times 275 = 175$$

Question 5.

Decrease 850 in the ratio 17 : 6 and then increase the result in the ratio 5 : 9.

Solution:

The given quantity = 850 and decrease in the ratio = 17 : 6

$$\text{The decreased quantity} = \frac{6}{17} \times 850 = 300$$

Now, the quantity is increased in the ratio 5 : 9

$$\text{The resulting quantity} = \frac{9}{5} \times 300 = 540$$

Question 6.

Decrease 850 in the ratio 17 : 6 and then decrease the resulting number again in 4 : 3.

Solution:

The given quantity = 850 and decrease in the ratio = 17:6

The decreased quantity = $\frac{6}{17} \times 850 = 300$

Now, the quantity is decreased again in the ratio = 4 : 3

The resulting quantity = $\frac{3}{4} \times 300 = 225$

Question 7.

Increase 1200 in the ratio 2 : 3 and then decrease the resulting number in the ratio 10 : 3.

Solution:

The given quantity = 1200 and increase in the ratio is 2 : 3

The increased quantity = $\frac{3}{2} \times 1200 = 1800$

Now, the quantity is decrease in the ratio 10 : 3

= $\frac{3}{10} \times 1800 = 540$

Question 8.

Increase 1200 in the ratio 3 : 7 and then increase the resulting number again in the ratio 4 : 7.

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Solution:

The given quantity = 1200 increase in the ratio is 3 : 7

The increased quantity = $\frac{7}{3} \times 1200 = 2800$

Now, the quantity is increased again in the ratio 4 : 7

The resulting quantity = $\frac{7}{4} \times 2800 = 4900$

Question 9.

The number 650 is decreased to 500 in the ratio a : b, find the ratio a : b.

Solution:

The given quantity = 650
and the decreased quantity = 500

The ratio (a : b) by which 650 is decreased to 500 = $\frac{650}{500} = \frac{13}{10}$

The resulting ratio = 13 : 10

Question 10.

The number 800 is increased to 960 in the ratio a : b, find the ratio a : b.

Solution:

The given quantity = 800
and the increased quantity = 960

The ratio (a : b) by which 800 is increased to 960 = $\frac{800}{960} = \frac{5}{6}$

The resulting ratio = 5 : 6