RD SHARMA

Solutions

Class 7 Maths

Chapter 9

Ex 9.2

Q1. Which ratio is larger in the following pairs?

(i) 3:4 or 9:16

Now L.C.M of 4 and 16 is 16

We have

$\frac{3}{4}$

$= \frac{3 \cdot 4}{4 \cdot 4}$

$= \frac{12}{16}$

And

$\frac{9}{16} = \frac{9}{16}$

Clearly

$12 > 9$

Therefore $\frac{3}{4} > \frac{9}{16}$

(ii) 15:16 or 24:25

Now LCM of 16 and 25 is 400

We have

$15 : 16 = \frac{15 \times 25}{16 \times 25}$

$= \frac{375}{400}$

$24 : 25 = \frac{24 \times 16}{25 \times 16}$

$= \frac{384}{400}$

$\frac{384}{400} > \frac{375}{400}$

$\frac{15}{16} < \frac{24}{25}$

(iii) 4:7 or 5:8

LCM of 7 and 8 is 56

$4 : 7 = \frac{4 \times 8}{7 \times 8}$

$= \frac{32}{56}$

$5 : 8 = \frac{5 \times 7}{8 \times 7}$

$= \frac{35}{56}$

$\frac{35}{56} > \frac{32}{56}$

$\frac{5}{8} > \frac{4}{7}$

5:8>4:7

(iv) 9:20 or 8:13

LCM of 20 and 13 is 260

$9 : 20 = \frac{9 \times 13}{20 \times 13}$

$= \frac{160}{260}$

$8 : 13 = \frac{8 \times 20}{13 \times 20}$

$= \frac{117}{260}$

$\frac{160}{260} > \frac{117}{260}$

$\frac{8}{13} > \frac{9}{20}$

(v) 1:2 or 13:27

LCM of 2 and 27 is 54

$1 : 2 = \frac{1 \times 27}{2 \times 27}$

$= \frac{27}{54}$

$13 : 27 = \frac{13 \times 2}{27 \times 2}$

$= \frac{26}{54}$

$\frac{27}{54} > \frac{26}{54}$

$\frac{1}{2} > \frac{13}{27}$

Q2. Give the equivalent ratios of 6:8.

Equivalent ratios of 6:8

$\frac{6 \cdot 2}{8 \cdot 2} = \frac{12}{16}$ (By multiplying numerator and denominator by 2)

=6:8

$\frac{\frac{6}{2}}{\frac{8}{2}} = \frac{3}{4} = 3 : 4$ (By dividing numerator and denominator by 2)

Two equivalent ratios

3:4=12:16

Q3. Fill in the following blanks: $\frac{12}{20} = \frac{\ldots\ldots}{5} = \frac{9}{\ldots\ldots}$

$\frac{12}{20} = \frac{x}{5}$

$x = \frac{60}{20}$

$x = 3$

$\frac{12}{20} = \frac{9}{y}$

$12y = 180$

$y = \frac{180}{12}$

$y = 15$

x=3 and y=15