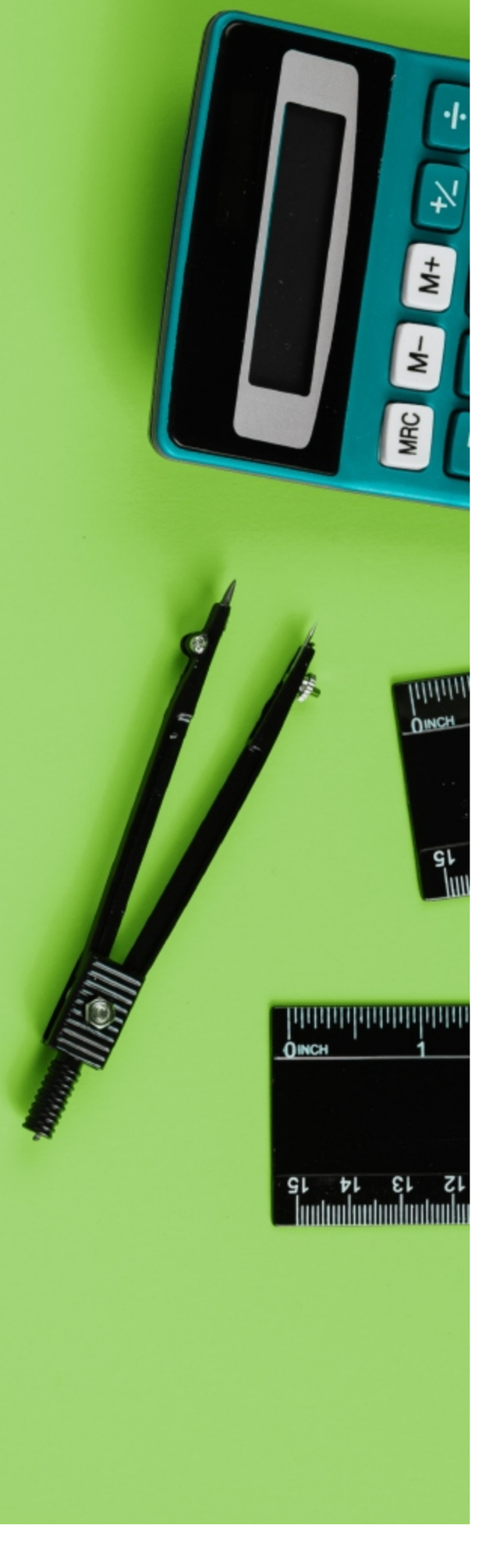
RD Sharma Solutions

Class 7

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Exercise 9.2

Q1 Which ratio is larger in the following pairs?

(i) 3:4 or 9:16 (ii) 15:16 or 24:25

(iii) 4:7 or 5:8 (iv) 9:20 or 8:13

(v) 1:2 or 13:27

Solution: (i) $3:4 = \frac{3}{4}$ and $9:16 = \frac{9}{16}$.

Now LCM (4, 16) = 16

Making same denominator of each fraction equals to 16, we have

$$\frac{3}{4} \times \frac{4}{4} = \frac{12}{16} \quad \text{and} \quad \frac{9}{16} \times \frac{1}{1} = \frac{9}{16}$$

$\because 12 > 9$

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

$\Rightarrow 3:4 > 9:16$

(ii) 15:16 or 24:25

$15:16 = \frac{15}{16}$ and $24:25 = \frac{24}{25}$

LCM (16, 25) = 400

$\because \frac{15}{16} \times \frac{25}{25} = \frac{375}{400}$ also $\frac{24}{25} \times \frac{16}{16} = \frac{384}{400}$

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$\because \quad 384 > 375$

$\Rightarrow \frac{24}{25} > \frac{15}{16}$

$\Rightarrow \quad 24:25 > 15:16$

(iii) $4:7$ or $5:8$

$\because 4:7 = \frac{4}{7}$ and $5:8 = \frac{5}{8}$

$\because LCM(7,8) = 56$

By making same denominator, we get

$\frac{4}{7} \times \frac{8}{8} = \frac{32}{56}$; $\frac{5}{8} \times \frac{7}{7} = \frac{35}{56}$

$\because 35 > 32$

$\Rightarrow \frac{5}{8} > \frac{4}{7} \quad \Rightarrow \quad 5:8 > 4:7$

(iv) $9:20$ or $8:13$

$\because 9:20 = \frac{9}{20}$ or $8:13 = \frac{8}{13}$

$\because LCM(20,13) = 260$

By making same denominator of each fraction equals to 260, we have

$\frac{9}{20} \times \frac{13}{13} = \frac{117}{260}$; $\frac{8}{13} \times \frac{20}{20} = \frac{160}{260}$

$\because \quad 160 > 117$

$\Rightarrow \frac{8}{13} > \frac{9}{20} \quad \Rightarrow 8:13 > 9:20$

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(v) 1 : 2 or 13 : 27

$\because 1:2 = \frac{1}{2}$ and $13:27 = \frac{13}{27}$

$\because$ LCM (2, 27) = 54

By making same denominator of each fraction equals to 54, we have

$\frac{1}{2} \times \frac{27}{27} = \frac{27}{54}$; $\frac{13}{27} \times \frac{2}{2} = \frac{26}{54}$

$\because 27 > 26$

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

$\Rightarrow 1:2 > 13:27$

Q2 Give two equivalent ratios of 6 : 8.

Solution: Two equivalent fractions of 6 : 8 are

$\frac{6 \times 2}{8 \times 2} = \frac{12}{16}$ and $\frac{6 \times 3}{8 \times 3} = \frac{18}{24}$

Q.3 Fill in the following blanks: $\frac{12}{20} = \frac{\square}{5} = \frac{9}{\square}$

Solution: $\frac{12}{20} = \frac{\square}{5}$

$\because 20 \div 4 = 5$ then $12 \div 4 = 3$

$\therefore \frac{12}{20} = \frac{3}{5}$; also $\frac{3}{5} = \frac{9}{\square} = \frac{9}{15}$

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