WELLAND GOULDSMITH SCHOOL

MATHEMATICS

CLASS -7

FRACTIONS AND DECIMALS

ANSWER KEY

EXERCISE 3.1

1(VI). 7/10 + 2/5 + 3/2 = $\frac{7X1}{10X1} + \frac{2X2}{5X2} + \frac{3X5}{2X5}$ = 7/10 + 4/10 + 15/10 = 26/10 = 13/5 = $2\frac{3}{5}$

2(II). 5/4, 7/8, 11/16 = $\frac{5X4}{4X4}$, $\frac{7X2}{8X2}$, $\frac{11X1}{16X1}$ = 20/16 > 14/16 > 11/16

10. Total weight of fruits = $3\frac{1}{2} + 4\frac{3}{4}$ = 7/2 + 19/4 = $\frac{7x2}{2x2}$ + 19/4 = 14/4 + 19/4 = 33/4 = $8\frac{1}{4}$ kg

EXERCISE- 3.2

3(VIII). $\frac{3}{2}$X 10 = $\frac{30}{2}$ = 15

5(d). $\frac{4}{5}$ of 20 = $\frac{80}{5}$ = 16

$\frac{4}{5}$ of 35 = $\frac{140}{5}$ = 28

6(v). 8 x $2\frac{2}{3}$ = 8 x $\frac{8}{3}$ = $\frac{64}{3}$ = $21\frac{1}{3}$

7(b). $\frac{5}{8}$ of $9\frac{2}{3}$ = $\frac{5}{8}$ x $\frac{29}{3}$ = $\frac{145}{24}$ = $6\frac{1}{24}$

$\frac{5}{8}$ of $4\frac{1}{7} = \frac{5}{8} \times \frac{29}{7} = \frac{145}{56} = 2\frac{33}{56}$

EXERCISE 3.3

1(iii). $\frac{2}{3}$ of $\frac{3}{5} = \frac{2}{3} \times \frac{3}{5} = \frac{2}{5}$

$\frac{2}{3}$ of $\frac{12}{7} = \frac{2}{3} \times \frac{12}{7} = \frac{8}{7} = 1\frac{1}{7}$

$\frac{2}{3}$ of $\frac{11}{5} = \frac{2}{3} \times \frac{11}{5} = \frac{22}{15} = 1\frac{7}{15}$

2(ix). $\frac{3}{5} \times \frac{15}{72} = \frac{1}{8}$

3(vii). $2\frac{1}{4} \times 2\frac{2}{15} = \frac{9}{4} \times \frac{32}{15} = \frac{3 \, x \, 8}{1 \, x \, 5} = \frac{24}{5} = 4\frac{4}{5}$

8. weight of gold and copper ornament = 38 g

weight of copper ornament = $\frac{3}{19}$th of its part = $\frac{3}{19}$ x 38 = 6 g

weight of gold ornament = 38-6 = 32g

10. using 1 litre of diesel car runs = 22 km

using $3\frac{3}{4}$ litres of diesel car runs = 22x $3\frac{3}{4}$ = 22 x $\frac{15}{4} = \frac{11 \, x \, 15}{2} = \frac{165}{2} = 82\frac{1}{2}$ km = 82.5 km

EXERCISE 3.4

1(vi). $3\frac{3}{4} = \frac{15}{4}$, reciprocal = $\frac{4}{15}$ (improper fractions)

2(iv). $24 \div 4\frac{1}{5} = 24 \div \frac{21}{5} = 24 \times \frac{5}{21} = \frac{40}{7} = 5\frac{5}{7}$

3(viii). $2\frac{1}{2} \div 5 = \frac{5}{2} \times \frac{1}{5} = \frac{1}{2}$

4(xi). $3\frac{1}{2} \div 2\frac{1}{10} = \frac{7}{2} \times \frac{10}{21} = \frac{5}{3} = 1\frac{2}{3}$

EXERCISE 3.5

1(v). 175.35 = 1x100 + 7x10 + 5x1 + 3x$\frac{1}{10}$ + 5x$\frac{1}{100}$

4(ii). 8 rupees 8 paise = ₹8.08

5(ii). 4875 g = $\frac{4875}{1000} kg$ = 4.875 kg

7(iii). 21.57 + 34.567 = 56.137

7(vi). 11.73 – 8.62 = 3.11

9. Ritu bought apples = 5.300 kg

Ritu bought mangoes = 3.500 kg

Total fruits bought by Ritu = 5.300 + 3.500 = 8.800 kg

Shiela bought apples = 4.800 kg

shiela bought mangoes = 4.150 kg

total fruits bought by shiela = 4.800 + 4.150 = 8.950 kg

more fruits bought by shiela = 8.950 – 8.800 = 0.150 kg = 150 g

EXERCISE 3.6

1(viii). 5x 149.55 = 747.75

1(xii). 0.88 x 8 = 7.04

2(xi). 53.07 x 1000 = 53070

4(iii). 0.5 x 316.8 = 158.4

4(x). 311.02 x 13.32 = 4142.78

6. fat in 1 kg of milk = 0.267 kg

fat in 10.5 kg of milk = 10.5 x 0.267 = 2.8035 kg

10. length of rectangle = 5.7 cm

breadth of rectangle = 3.8 cm

area of rectangle = length x breadth = 5.7 x 3.8 = 21.66cm

EXERCISE 3.7

1(viii). $0.36 \div 6 = 0.36 \times \frac{1}{6} = 0.06$

1(ix). $18.84 \div 4 = 18.84 \times \frac{1}{4} = 4.71$

3(viii). $372.3 \div 10 = 372.3 \times \frac{1}{10} = 37.23$

4(ix). $98.53 \div 100 = 98.53 \times \frac{1}{100} = 0.9853$

5(vii). $38.53 \div 1000 = 38.53 \times \frac{1}{1000} = 0.03853$

6(iv). $76.5 \div 0.15 = 11.475$