Quick Assessment

Write the reciprocals of the following fractions.

	1.	2.	3.	4.
Fraction	$\frac{4}{7}$	$\frac{1}{3}$	$\frac{2}{7}$	$1\frac{1}{8}$
Reciprocal				

Solutions:-

1) $\frac{4}{7}$

$= \frac{7}{4}$

2) $\frac{1}{3}$

$= \frac{3}{1}$

4) $1\frac{1}{8}$

$= \frac{9}{8} = \frac{8}{9}$
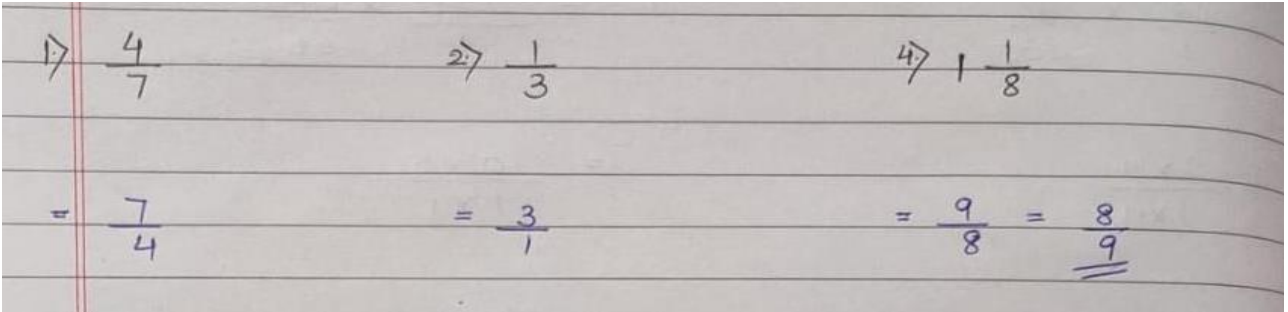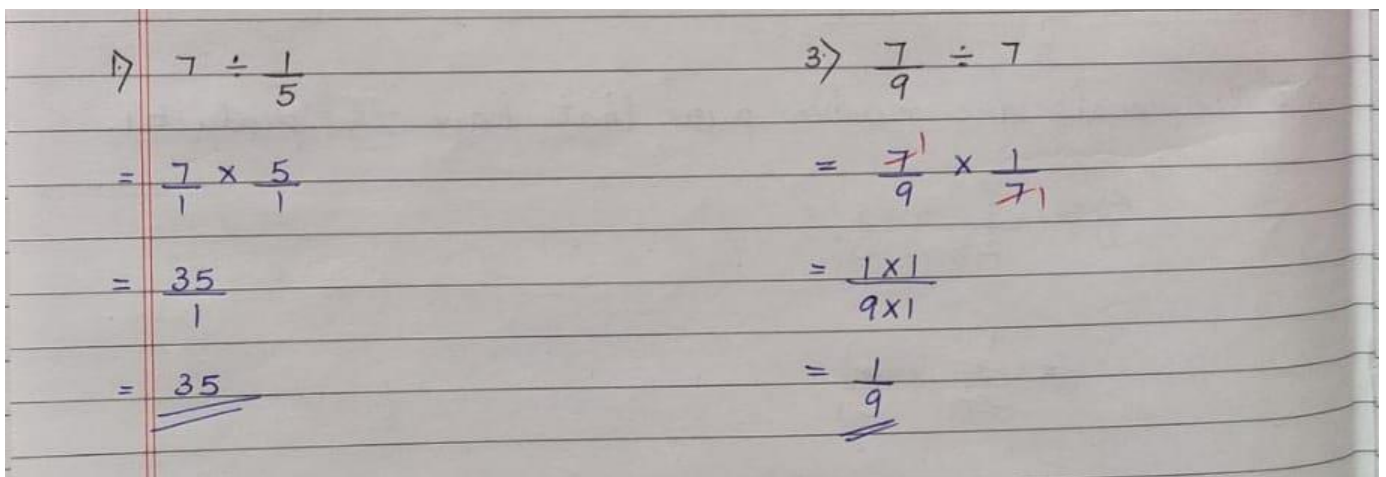
In Quick Assessment Q3 is homework.

Self Practice 8D

Find the quotient in the simplest form.

1. $7 \div \frac{1}{5}$
2. $18 \div \frac{3}{5}$
3. $\frac{7}{9} \div 7$
4. $\frac{8}{21} \div \frac{7}{3}$
5. $\frac{7}{5} \div \frac{7}{5}$
6. $\frac{21}{28} \div \frac{14}{3}$
7. $0 \div 5\frac{7}{11}$
8. $4\frac{1}{2} \div 18$
9. $1 \div 3\frac{2}{7}$
10. $8\frac{4}{7} \div \frac{4}{21}$
11. $2\frac{3}{4} \div 1\frac{1}{4}$
12. $1010 \div 3\frac{1}{3}$
13. $2\frac{2}{3} \div 1\frac{2}{3}$
14. $16\frac{1}{2} \div 2\frac{3}{4}$
15. $16 \div 2\frac{2}{15}$
16. $1\frac{11}{15} \div 1\frac{4}{35}$
17. $3\frac{3}{17} \div 2\frac{6}{51}$
18. $3\frac{22}{38} \div 1\frac{18}{57}$

Solutions:-

1) $7 \div \frac{1}{5}$

$= \frac{7}{1} \times \frac{5}{1}$

$= \frac{35}{1}$

$= 35$

3) $\frac{7}{9} \div 7$

$= \frac{7^1}{9} \times \frac{1}{7_1}$

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

$= \frac{1}{9}$

4) $\dfrac{8}{21} \div \dfrac{7}{3}$

$= \dfrac{8}{\cancel{21}_{7}} \times \dfrac{\cancel{3}^{1}}{7}$

$= \dfrac{8 \times 1}{7 \times 7}$

$= \dfrac{8}{49}$

6) $\dfrac{21}{28} \div \dfrac{14}{3}$

$= \dfrac{\cancel{21}^{3}}{28} \times \dfrac{3}{\cancel{14}_{2}}$

$= \dfrac{3 \times 3}{28 \times 2}$

$= \dfrac{9}{56}$

7) $0 \div 5\dfrac{7}{11}$

$= \dfrac{0}{1} \div \dfrac{62}{11}$

$= \dfrac{0}{1} \times \dfrac{11}{62}$

$= \dfrac{0}{62}$

$= 0$

9) $1 \div 3\dfrac{2}{7}$

$= \dfrac{1}{1} \div \dfrac{23}{7}$

$= \dfrac{1}{1} \times \dfrac{7}{23}$

$= \dfrac{1 \times 7}{1 \times 23}$

$= \dfrac{7}{23}$

11.) $2 \frac{3}{4} \div 1 \frac{1}{4}$

$= \frac{11}{4} \div \frac{5}{4}$

$= \frac{11}{\cancel{4}_1} \times \frac{\cancel{4}^1}{5}$

$= \frac{11 \times 1}{1 \times 5}$

$= \frac{11}{5} = 2 \frac{1}{5}$

14.) $16 \frac{1}{2} \div 2 \frac{3}{4}$

$= \frac{33}{2} \div \frac{11}{4}$

$= \frac{\cancel{33}^3}{\cancel{2}_1} \times \frac{\cancel{4}^2}{\cancel{11}_1}$

$= \frac{3 \times 2}{1 \times 1}$

$= \frac{6}{1} = 6$

12.) $1010 \div 3 \frac{1}{3}$

$= \frac{1010}{1} \div \frac{10}{3}$

$= \frac{\cancel{1010}^{101}}{1} \times \frac{3}{\cancel{10}_1}$

$= \frac{101 \times 3}{1 \times 1}$

$= \frac{303}{1} = 303$

18.) $3 \frac{22}{38} \div 1 \frac{18}{57}$

$= \frac{136}{38} \div \frac{75}{57}$

$= \frac{\cancel{136}^{68}}{\cancel{38}_{\cancel{14}_1}} \times \frac{\cancel{57}^{\cancel{3}^1}}{\cancel{75}_{25}}$

$= \frac{68 \times 1}{1 \times 25}$

$= \frac{68}{25} = 2 \frac{18}{25}$

1. **Find:**

(a) $\frac{4}{22}$ of 88   (b) $\frac{3}{7}$ of 35   (c) $\frac{1}{8}$ of 64   (d) $\frac{1}{210}$ of 3000

Solution 1:-

(a) $\frac{4}{22}$ of 88

$= \frac{4}{22} \times \frac{88}{1}$

$= \frac{4 \times 4}{1 \times 1}$

$= \frac{16}{1} = 16$

(b) $\frac{3}{7}$ of 35

$= \frac{3}{7} \times \frac{35}{1}$

$= \frac{3 \times 5}{1 \times 1}$

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

(d) $\frac{1}{210}$ of 3000

$= \frac{1}{210} \times \frac{3000}{1}$

$= \frac{100}{7} = 14\frac{2}{7}$

In Q1. (c) is homework.

2. Fill in the blanks.

(a) $\frac{1}{5}$ of one day = _____ hours.

(b) $\frac{3}{5}$ of 25 km = _____ km.

(c) $\frac{1}{6}$ of two hours = _____ minutes.

(d) $\frac{1}{4}$ of a dozen = _____ items.

(e) $\frac{5}{12}$ of a minute = _____ seconds.

(f) $\frac{22}{40}$ of a metre = _____ centimetres.

Solution 2:-

(a) $\frac{1}{5}$ of one day = ____ hours

sol(a) $\boxed{1 \text{ day} = 24 \text{ hours}}$

$$= \frac{1}{5} \times \frac{24}{1} \text{ hours}$$

$$= \frac{24}{5} = 4\frac{4}{5} \text{ hours}$$

$$\begin{array}{r} 4 \\ 5\overline{)24} \\ -20 \\ \hline 04 \end{array}$$

(b) $\frac{3}{5}$ of 25 km = ____ Km

sol(b)

$$= \frac{3}{\cancel{5}_1} \times \frac{\cancel{25}^5}{1} \text{ Km}$$

$$= \frac{3 \times 5}{1 \times 1} \text{ Km}$$

$$= \frac{15}{1} \text{ Km} = 15 \text{ Km}$$

(c) $\frac{1}{6}$ of two hours = _____ minutes

Sol(c)

| 1 hour = 60 mins |
| 2 hour = 2×60 mins = 120 minutes |

$= \frac{1}{6_1} \times \frac{\overset{20}{120}}{1}$ mins

$= \frac{1 \times 20}{1 \times 1}$ mins

$= \frac{20}{1} = 20$ mins

(d) $\frac{1}{4}$ of a dozen = _____ items

Sol (d)

| 1 dozen = 12 |

$= \frac{1}{4_1} \times \frac{\overset{3}{12}}{1}$

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

$= \frac{3}{1} = 3$ items

(e) $\dfrac{5}{12}$ of a minute = _____ seconds.

Sol (e)
$$\boxed{1 \text{ min} = 60 \text{ sec}}$$

$$= \dfrac{5}{\cancel{12}_1} \times \dfrac{\overset{5}{\cancel{60}}}{1} \text{ secs}$$

$$= \dfrac{5 \times 5}{1 \times 1} \text{ secs}$$

$$= \dfrac{25}{1} \text{ secs}$$

$$= \underline{\underline{25 \text{ secs}}}$$

(f) $\dfrac{22}{40}$ of a metre = _____ centimetres.

Sol (f)
$$\boxed{1 m = 100 \text{ cm}}$$

$$= \dfrac{\overset{11}{\cancel{22}}}{\underset{\cancel{8}\times_1}{\cancel{40}}} \times \dfrac{\overset{20 \overset{5}{\cancel{\text{to}}}}{\cancel{100}}}{1} \text{ cm}$$

$$= \dfrac{11 \times 5}{1 \times 1} \text{ cm}$$

$$= \dfrac{55}{1} \text{ cm} = \underline{\underline{55 \text{ cm}}}$$

In this exercise Q3, Q4 and Q5 are omitted.