Chapter - 4

DATE: 2/11/2020

Fractions

Fraction → A Fraction is defined as a part of a whole number. It can be expressed as a ratio between two integers separated by a solidus.

Ex:- $\frac{3}{7}$ → 3 is the numerator
7 → 7 is the denominator.
It is read as three - Sevenths.

Types of Fractions

- Proper fractions → It is a type of fraction where the denominator is always greater than the numerator. Ex → $\frac{4}{5}$

- Improper fractions → It is a type of fraction where the denominator is always less than the numerator. Ex:- $\frac{7}{3}$

- Mixed fractions → The type of fractions which consists of a whole number and a proper fraction. Ex:- $16\frac{3}{4}$

- Like fractions → The type of fractions which have same denominators are called like fractions. Ex $\frac{1}{15}$

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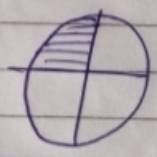
- Unlike fractions → The type of fractions which have different denominators are called, unlike fractions. Ex → $\frac{6}{27}$

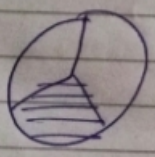
✡ Fraction = $\frac{\text{Numerator}}{\text{Denominator}}$

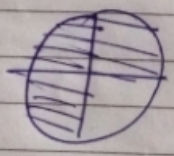
✡ Representing fractions

- Fractions can be represented using numbers, figures or words.

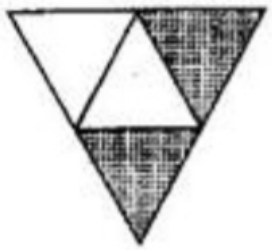
$\frac{1}{2}$ = 

$\frac{1}{4}$ = 

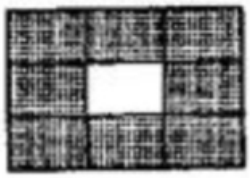
$\frac{1}{3}$ = 

$\frac{3}{4}$ = 

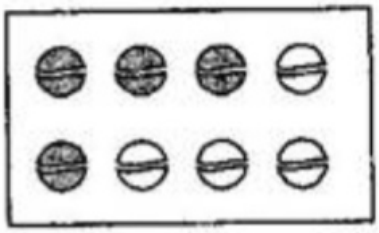
Question 1. Write the fraction representing the shaded portion:



(i)



(ii)



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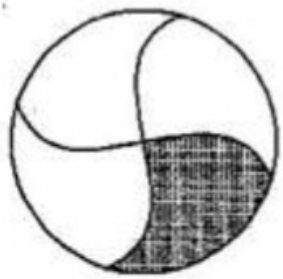

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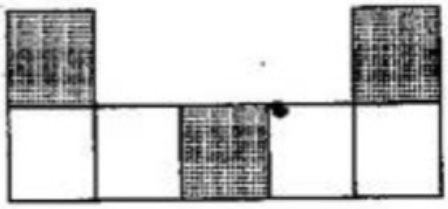

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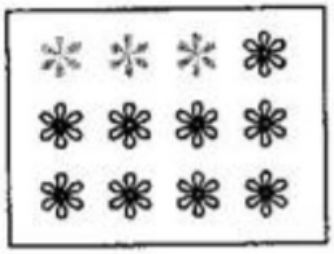

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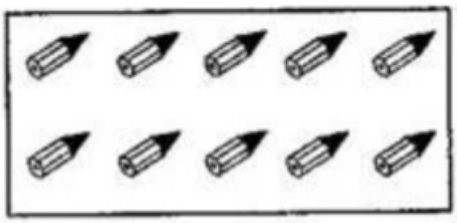

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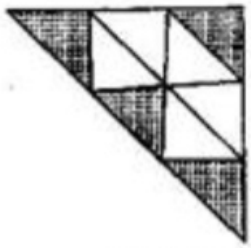
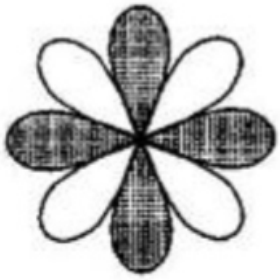
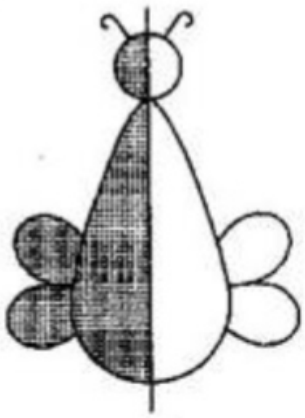


(viii)



(ix)



(x)

[redacted]

Answer:

(i) $\frac{2}{4}$

(ii) $\frac{8}{9}$

(iii) $\frac{4}{8}$

(iv) $\frac{1}{4}$

(v) $\frac{3}{7}$

(vi) $\frac{3}{12}$

(vii) $\frac{10}{10}$

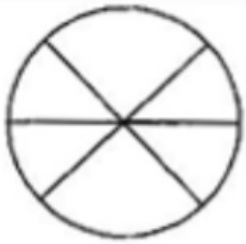
(viii) $\frac{4}{9}$

(ix) $\frac{4}{8}$

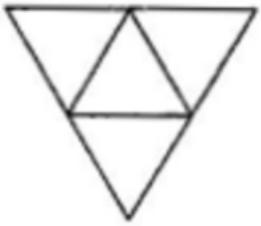
(x) $\frac{1}{2}$

[redacted]

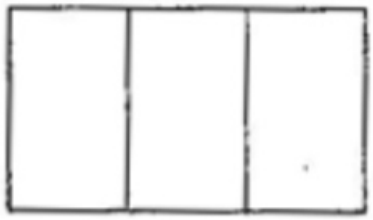
Question 2. Colour the part according to the given fraction:



(i) $\frac{1}{6}$

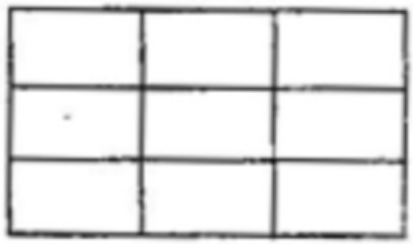


(ii) $\frac{1}{4}$



(iii) $\frac{1}{3}$

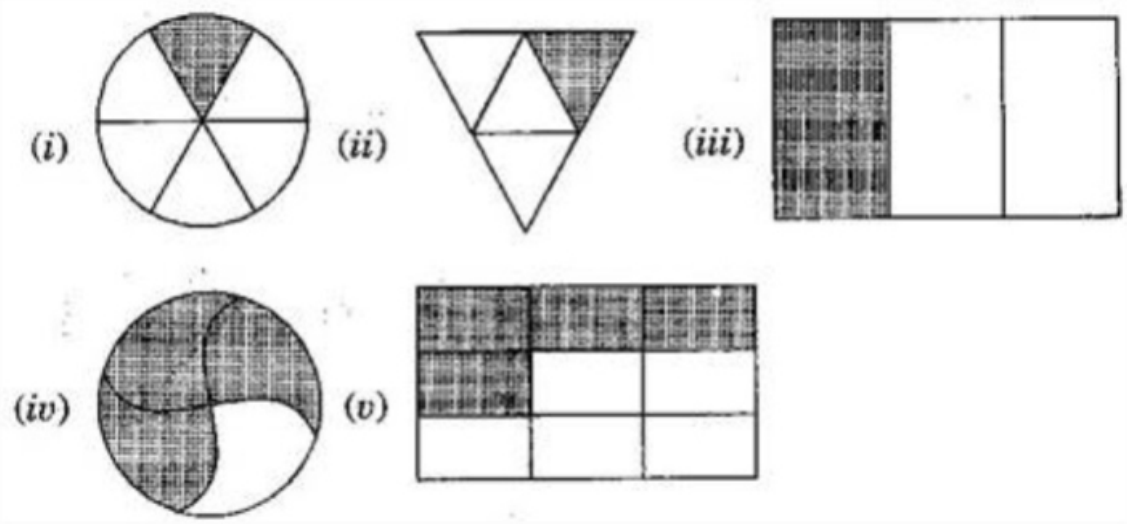
(iv) $\frac{3}{4}$



(v) $\frac{4}{9}$

[redacted]

Answer:



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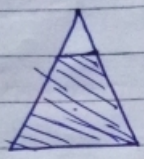
Day - 13 Nov 2020 Class - 6th

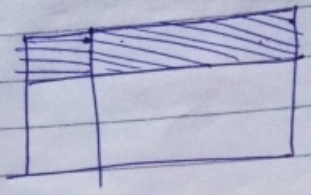
Chapter 7.1

Q1. & Q2. Solve in book.

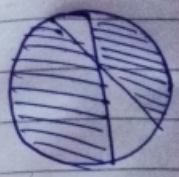
Q3 Identify the error, if any?



This is $\frac{1}{2}$



This is $\frac{1}{4}$



This is $\frac{3}{4}$

Ans Shaded portions do not represent the given fractions.

Q4. What fractions of a day is 8 hours?

Ans There are 24 hours in a day.
We have 8 hours.
So required fraction is $\frac{8}{24}$.

Q5. What fraction of an hour is 40 minutes?

Ans There are 60 min. in 1 hour.
we have 40 minutes.
So required fraction is $\frac{40}{60}$.

Day 4 Nov 2020

Questions on fg no. 127.

Q6. Arya, Abhimanyu and vivek _____ Sandwich

(a) How can _____ Share?

Sol. Arya has divided the sandwich into 3 equal parts. So each person will get one part.

(b) ε

Sol. Each boy recieve = $\frac{1}{3}$ part.

required fraction is $\frac{1}{3}$.

Q7. Kanchan dyes _____ finished?

Sol. total number of dresses Kanchan has to dye = 30

No. of dresses she has finished = 20

Required fraction = $\frac{20}{30} = \frac{2}{3}$

Q8. Write the _____ numbers?

Sol. Natural numbers from 2 to 12 are

2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

Total natural no are = 11

No. of prime numbers = 5

Required fraction = $\frac{5}{11}$

Q9.

Sol.

Q10

Sol.

Q11.

Sol

Q9. Write _____ prime numbers?

Sol. Natural number from 102 to 113 are
102, 103, 104, 105, 106, 107, 108, 109, 110, 111
112, 113
total natural numbers are = 12
No. of prime numbers = 4 (103, 107, 109, 113)
Required fraction $= \frac{4}{12} = \frac{1}{3}$

Q10. What fraction _____ in them?

Sol. Total number of circles in the figure = 8
Number of circles having x's in them = 4
Required fraction $= \frac{4}{8} = \frac{1}{2}$

Q11. Kristin _____ gift?

Sol. Number of CDs she bought from the market = 3
Number of CDs received as gift = 5
total no. of CDs = 3 + 5 = 8
Fraction of CDs she bought = $\frac{3}{8}$

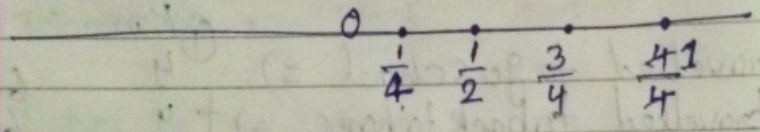
Fraction of CDs she received as gift = $\frac{5}{8}$.

Day - 5 NOV 2020

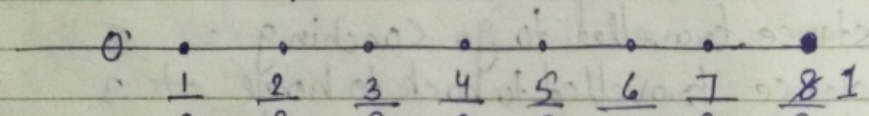
Ex - 7.2

Q1. Draw number lines and locate the points on them.

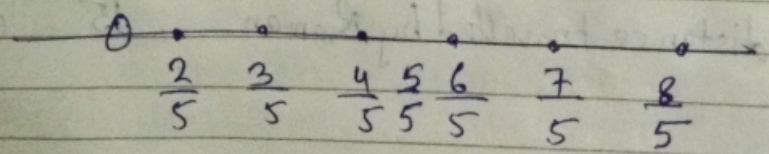
Sol(a) $\frac{1}{2}, \frac{1}{4}, \frac{3}{4}, \frac{4}{4}$



(b) $\frac{1}{8}, \frac{2}{8}, \frac{3}{8}, \frac{7}{8}$



(c) $\frac{2}{5}, \frac{3}{5}, \frac{8}{5}, \frac{4}{5}$



Q2.

(a) $\frac{20}{3} \Rightarrow 6\frac{2}{3}$

divisor 6 ← Quotient

3) 20

−18

2 ← R.

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(b) $\frac{11}{5}$: $5\overline{)11}$ $\begin{array}{r}2\\ -10\\ \hline 1\end{array}$ $\Rightarrow 2\frac{1}{5}$

(c) $\frac{17}{7}$: $7\overline{)17}$ $\begin{array}{r}2\\ -14\\ \hline 3\end{array}$ $\Rightarrow 2\frac{3}{7}$

(d) $\frac{28}{5}$ = $5\overline{)28}$ $\begin{array}{r}5\\ -25\\ \hline 3\end{array}$ $\Rightarrow 5\frac{3}{5}$

(e) $\frac{19}{6}$ = $6\overline{)19}$ $\begin{array}{r}3\\ -18\\ \hline 1\end{array}$ $\Rightarrow 3\frac{1}{6}$

(f) $\frac{35}{9}$ = $9\overline{)35}$ $\begin{array}{r}3\\ -27\\ \hline 8\end{array}$ $\Rightarrow 3\frac{8}{9}$

Q3. $7\frac{3}{4}$ = $7\times4+3/4 \Rightarrow \frac{31}{4}$

(b) $5\frac{6}{7}$ = $(5\times7+6)/7 \Rightarrow \frac{41}{7}$

(c) $2\frac{5}{6} \Rightarrow (2\times6+5)/6 = \frac{17}{6}$

(d) $10\frac{3}{5} \Rightarrow (10\times5+3)/5 = \frac{53}{5}$

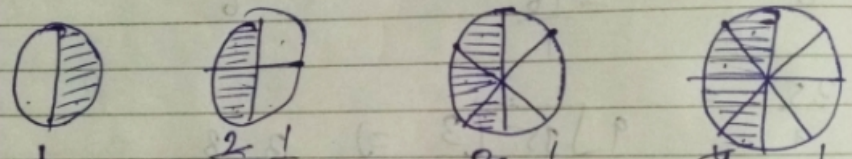
(e) $9\frac{3}{7} = (9\times7+3)/7 \Rightarrow \frac{66}{7}$

(f) $8\frac{4}{9} = (8\times9+4)/9 \Rightarrow \frac{76}{9}$

Ex - 7.3

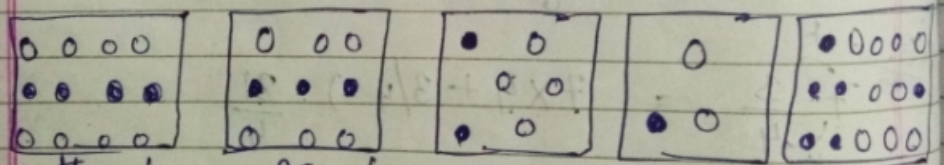
Q1 Write the fractions. Are all these fractions equivalents -

(a)



$\frac{1}{2}$ $\frac{2}{4}\ \frac{1}{2}$ $\frac{3}{6}\ \frac{1}{2}$ $\frac{4}{8} = \frac{1}{2}$

(b)



$\frac{4}{12} = \frac{1}{3}$ $\frac{3}{9} = \frac{1}{3}$ $\frac{2}{6} = \frac{1}{3}$ $\frac{1}{3}$ $\frac{6}{15} = \frac{2}{5}$

(a) Yes, all fractions are equivalent.

(b) No, all fractions are not equivalent.

Q2. Write the fraction and pair up the equivalent fractions from each row -

(a) $\frac{1}{2}$ (b) $\frac{4}{6} = \frac{2}{3}$ (c) $\frac{3}{9} = \frac{1}{3}$ (d) $\frac{2}{8} = \frac{1}{4}$

(e) $\frac{3}{4}$

(i) $\frac{6}{18} = \frac{1}{3}$ (ii) $\frac{4}{8} = \frac{1}{2}$ (iii) $\frac{12}{16} = \frac{3}{4}$

(iv) $\frac{8}{12} = \frac{2}{3}$ (v) $\frac{4}{16} = \frac{1}{4}$

The following are the equivalent fractions:-

(a) and (ii) = $\frac{1}{2}$

(b) and (iv) = $\frac{2}{3}$

(c) and (i) = $\frac{1}{3}$

(d) and (v) = $\frac{1}{4}$

(e) and (iii) = $\frac{3}{4}$

Q2

(i) $\frac{2}{7} = \frac{8}{\square}$

$\square = 28$

$2 \times \square = 7 \times 8$

$2 \times \square = 56$

$\square = \frac{56}{2} = 28$

(b) $\frac{5}{8} = \frac{10}{\boxed{16}}$

$5 \times \boxed{} = 8 \times 10$

$\boxed{} = \frac{80}{5} = 16$

(c) $\frac{3}{5} = \frac{\boxed{12}}{20}$

$3 \times 20 = 5 \times \boxed{}$

$60 = 5 \times \boxed{}$

$\boxed{} = \frac{60}{5} = 12$

(d) $\frac{45}{60} = \frac{15}{\boxed{20}}$

$45 \times \boxed{} = 60 \times 15$

$45 \times \boxed{} = 900$

$\boxed{} = \frac{900}{45} = 20$

(e) $\frac{18}{24} = \frac{\boxed{3}}{4}$

$24 \times \boxed{} = 18 \times 4$

$24 \times \boxed{} = 72$

$\boxed{} = \frac{72}{24} = 3$

Q4 Find the equivalent fraction of $\frac{3}{5}$ having:-

(a) denominator 20.

we require denominator 20
Let M be the numerator of the fractions

$$\frac{M}{20} = \frac{3}{5}$$

$$5 \times M = 20 \times 3$$

$$5M = 60$$

$$M = \frac{60}{5} = 12$$

required fraction is $\frac{12}{20}$.

(b) numerator = 9

Let N be the denominator of the fractions

$$\frac{9}{N} = \frac{3}{5}$$

$$N \times 3 = 9 \times 5$$

$$N \times 3 = 45$$

$$N = \frac{45}{3} = 15$$

required fraction is $\frac{9}{15}$

(c) denominator 30

Sol Let P be the numerator of the fraction.

$$\frac{P}{30} = \frac{3}{5}$$

$$P \times 5 = 30 \times 3$$

$$P \times 5 = 90$$

$$P = \frac{90}{5} \Rightarrow 18$$

Re. fraction $= \frac{18}{30}$.

(d) numerator = 27

Let R be the denominator of the fraction.

Sol $\frac{27}{R} = \frac{3}{5}$

$$R \times 3 = 27 \times 5$$

$$R \times 3 \Rightarrow 135$$

$$R = \frac{135}{3} = 45$$

Re. fraction $= \frac{27}{45}$

Qs. Find the equivalent fraction of $\frac{36}{48}$ with:

(a) numerator 9

Sol Let x be the denominator of the fraction

$$\frac{9}{x} \not\rightleftharpoons \frac{36}{48}$$

$$x \times 36 = 9 \times 48$$
$$x \times 36 = 432$$
$$x = \frac{432}{36} = 12$$

Re. fraction $= \frac{9}{12}$.

(b) denominator $= 4$

Sol Let N be the numerator of the fraction

$$\frac{N}{4} \not\rightleftharpoons \frac{36}{48}$$

$$N \times 48 = 4 \times 36$$
$$N \times 48 = 144$$
$$N = \frac{144}{48} = 3$$

Re. fraction $= \frac{3}{4}$.

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Ex - 7.3

Q6. Check whether the given fractions are equivalent:

(a) $\frac{5}{9}, \frac{30}{54}$

Sol. Given $\frac{5}{9} \times \frac{30}{54}$

$5 \times 54 = 270$

$9 \times 30 = 270$

$5 \times 54 = 9 \times 30$

$270 = 270$

$\frac{5}{9}, \frac{30}{54}$ are equivalent fractions.

(b) $\frac{3}{10} \times \frac{12}{20}$

Sol. $\frac{3}{10} \times \frac{12}{20}$

$3 \times 20 = 60$

$10 \times 12 = 120$

$3 \times 20 \neq 10 \times 12$

$\frac{3}{10}, \frac{12}{20}$ are not equivalent fractions.

(c) $\frac{7}{13}, \frac{5}{11}$, $\frac{7}{13} \times \frac{5}{11}$

Sol. $7 \times 11 = 77$

$13 \times 5 = 65$

$7 \times 11 \neq 13 \times 5$

$\frac{7}{13}, \frac{5}{11}$ are not equivalent fractions

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Q7. Reduce the following fractions to simplest form:

(a) $\frac{48}{60} \Rightarrow \frac{48}{60} = \frac{4}{5}$

(b) $\frac{150}{60} \Rightarrow \frac{5}{2}$

(c) $\frac{84}{98} \Rightarrow \frac{84}{98} = \frac{6}{7}$

(d) $\frac{12}{52} \Rightarrow \frac{12}{52} = \frac{3}{13}$

(e) $\frac{7}{28} \Rightarrow \frac{7}{28} = \frac{1}{4}$

Q8. Ramesh _____ pencils?

Sol. total no. of pencils ~~Used by~~ Ramesh had = 20
no. of pencils used by Ramesh = 10
fraction $\Rightarrow \frac{10}{20} = \frac{1}{2}$

total no. of pencils Sheelu had = 50
no. of pencils used by sheelu = 25
fraction $= \frac{25}{50} = \frac{1}{2}$

total no. of pencils Jamaal had = 80
no of pencils used by Jamaal = 40
fraction $= \frac{40}{80} = \frac{1}{2}$

Yes, each has used up an equal fraction of pencils $= \frac{1}{2}$.

Q9. Match the equivalent fractions and write two more for each:-

(i) $\frac{250}{400} = \frac{5}{8}$ (d)

(ii) $\frac{180}{200} = \frac{9}{10}$ (e)

(iii) $\frac{660}{990} \Rightarrow \frac{2}{3}$ (a)

(iv) $\frac{180}{360} = \frac{1}{2}$ (c)

(v) $\frac{220}{550} = \frac{2}{5}$ (b)

(a) $\frac{2}{3}$

(b) $\frac{2}{5}$

(c) $\frac{1}{2}$

(d) $\frac{5}{8}$

(e) $\frac{9}{10}$

(i) $\frac{5}{8}$, $\frac{5}{8} \times \frac{5}{5} \Rightarrow \frac{25}{40}$, $\frac{5}{8} \times \frac{8}{8} \Rightarrow \frac{40}{64}$

(ii) $\frac{9}{10}$, $\frac{9}{10} \times \frac{2}{2} \Rightarrow \frac{18}{20}$, $\frac{9}{10} \times \frac{3}{3} = \frac{27}{90}$

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(iii) $\frac{2}{3} = \frac{2}{3} \times \frac{10}{10} = \frac{20}{30}$, $\frac{2}{3} \times \frac{20}{20} = \frac{40}{60}$

(iv) $\frac{1}{2} = \frac{1}{2} \times \frac{2}{2} = \frac{2}{4}$, $\frac{1}{2} \times \frac{4}{4} = \frac{4}{8}$

(v) $\frac{2}{5} = \frac{2}{5} \times \frac{3}{3} = \frac{6}{15}$, $\frac{2}{5} \times \frac{7}{7} = \frac{14}{35}$

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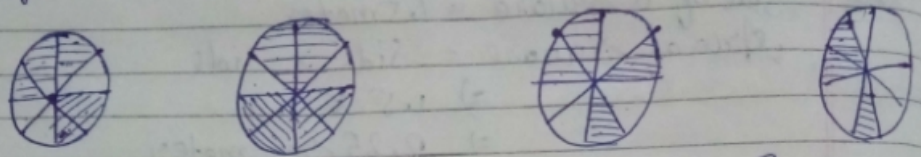
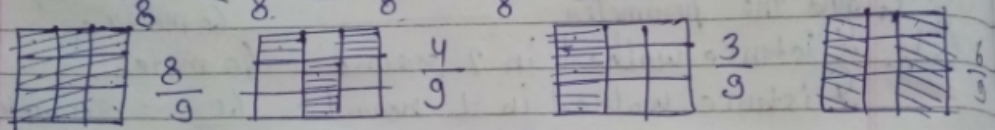
Day 18 Nov 2020 Ex-7.4

Q1. Write shaded fraction as fraction. Arrange them in ascending & descending order using correct sign '<' or '>' '=' between the fractions:-

(a) 

$\frac{5}{8}$ $\frac{6}{8}$ $\frac{4}{8}$ $\frac{3}{8}$

$\frac{3}{8} < \frac{4}{8} < \frac{5}{8} < \frac{6}{8}$

(b) 

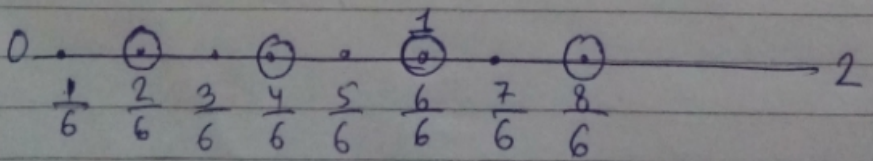
$\frac{8}{9}$ $\frac{4}{9}$ $\frac{3}{9}$ $\frac{6}{9}$

$\frac{3}{9} < \frac{4}{9} < \frac{6}{9} < \frac{8}{9}$

(c) Show $\frac{2}{6}$, $\frac{4}{6}$, $\frac{8}{6}$ and $\frac{6}{6}$ on the number line, put appropriate sign between the fraction given:-

Sol $\frac{5}{6} \boxed{>} \frac{2}{6}$, $\frac{3}{6} \boxed{>} 0$, $\frac{1}{6} \boxed{<} \frac{6}{6}$ 1

$\frac{8}{6} \boxed{>} \frac{5}{6}$ ..



Q2. Compare the fractions and Put an appropriate Sign:-

(a) $\frac{3}{6}$ ☐ $\frac{5}{6}$ (b) $\frac{1}{7}$ ☐ $\frac{1}{4}$

(c) $\frac{4}{5}$ ☐ $\frac{5}{5}$ (d) $\frac{3}{5}$ ☐ $\frac{3}{7}$

Q3. Make five more each pairs and put appropriate signs;-

(i) $\frac{5}{8}$ ☐ $\frac{6}{8}$

(ii) $\frac{5}{7}$ ☐ $\frac{7}{7}$

(iii) $\frac{6}{13}$ ☐ $\frac{6}{18}$

(iv) $\frac{5}{25}$ ☐ $\frac{3}{25}$

(v) $\frac{9}{50}$ ☐ $\frac{9}{45}$

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Day 20 Nov 2020

Ex - 7.4

Q4. Look at figures and writes $<$, $>$ or $=$ between the given pairs of fractions:-

(a) $\frac{1}{6} \square \frac{1}{8}$ (b) $\frac{3}{4} \square \frac{21}{63}$ (c) $\frac{2}{3} \square \frac{2}{4}$

(d) $\frac{6}{6} \square \frac{8}{8}$ (e) $\frac{5}{6} \square \frac{81}{5}$

Q5. How quickly can you do this? Fill appropriate sign ($<$, $=$, $>$)

(a) $\frac{1}{2} \square \frac{1}{5}$ (b) $\frac{1}{2} \frac{2}{4} \square \frac{8}{6} \frac{1}{2}$ (c) $\frac{3}{5} \square \frac{2}{3}$

(d) $\frac{3}{4} \square \frac{21}{84}$ (e) $\frac{3}{5} \square \frac{6}{5}$ (f) $\frac{7}{9} \square \frac{3}{9}$

(g) $\frac{1}{4} \square \frac{21}{84}$ (h) $\frac{36}{510} \square \frac{4}{5}$ (i) $\frac{3}{4} \square \frac{7}{8}$

(j) $\frac{36}{510} \square \frac{3}{5}$ (k) $\frac{5}{7} \square \frac{15}{21} \frac{5}{7}$

Q6.
(a)
(b)
(c)
(d)
(e)
(f)
(g)
(h)
(i)

Q6. The following ____ form:-

(a) $\frac{2}{12} \Rightarrow \frac{2 \div 2}{12 \div 2} \Rightarrow \frac{1}{6}$

(b) $\frac{3}{15} \Rightarrow \frac{3 \div 3}{15 \div 3} \Rightarrow \frac{1}{5}$

(c) $\frac{8}{50} \Rightarrow \frac{8 \div 2}{50 \div 2} \Rightarrow \frac{4}{25}$

(d) $\frac{16}{100} \Rightarrow \frac{16 \div 4}{100 \div 4} \Rightarrow \frac{4}{25}$

(e) $\frac{10}{60} \Rightarrow \frac{10}{60} = \frac{1}{6}$

(f) $\frac{15}{75} \Rightarrow \frac{15 \div 15}{75 \div 15} \Rightarrow \frac{1}{5}$

(g) $\frac{12}{60} \Rightarrow \frac{12 \div 12}{60 \div 12} = \frac{1}{5}$

(h) $\frac{16}{96} \Rightarrow \frac{16 \div 16}{96 \div 16} \Rightarrow \frac{1}{6}$

(i) $\frac{12}{75} \Rightarrow \frac{12 \div 3}{75 \div 3} \Rightarrow \frac{4}{25}$

(j) $\frac{12}{72} \Rightarrow \frac{12 \div 12}{72 \div 12} = \frac{1}{6}$

(f) $\frac{3}{18} \Rightarrow \frac{3 \div 3}{18 \div 3} \Rightarrow \frac{1}{6}$

(l) $\frac{4}{25} \Rightarrow \frac{4}{25}$

(i) $\frac{1}{6} \Rightarrow (a), (e), (h), (j), (k)$

(ii) $\frac{1}{5} \Rightarrow (b), (f), (g)$

(iii) $\frac{4}{25} \Rightarrow (c), (d), (i), (l)$

Day 21 Nov 2020

Ex 7.4

Q1. Find answers to the following. Write and indicate how you solved them :-

(a) Is $\frac{5}{9}$ equal to $\frac{4}{5}$?

Sol

3	9, 5
3	3, 5
5	1, 5
	1 1

convert these fractions into like fractions. (LCM = 45)

$\frac{5}{9} \times \frac{5}{5} \Rightarrow \frac{25}{45}$

$\frac{4}{5} \times \frac{9}{9} \Rightarrow \frac{36}{45}$

$\frac{25}{45} \neq \frac{36}{45}$

So $\frac{5}{9}$ is not equal to $\frac{4}{5}$.

(b) Is $\frac{9}{16}$ equal to $\frac{5}{9}$?

Sol

2	16, 9
2	8, 9
2	4, 9
2	2, 9
2	1, 9
3	1, 3
	1, 1

Convert these fractions into like fraction. (LCM = 144)

$\frac{9}{16} \times \frac{9}{9} \Rightarrow \frac{81}{144}$

$\frac{5}{9} \times \frac{16}{16} \Rightarrow \frac{80}{144}$

$\frac{81}{144} \neq \frac{80}{144}$

So $\frac{9}{16}$ is not equal to $\frac{5}{9}$,

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(c) Is $\frac{4}{5}$ equal to $\frac{16}{20}$?

2	5, 20
2	5, 10
5	5, 5
	1, 1

Sol. Convert these fractions into like fractions. (LCM = 20)

$\frac{4}{5} \times \frac{4}{4} \Rightarrow \frac{16}{20}$

$\frac{16}{20} \times \frac{1}{1} \Rightarrow \frac{16}{20}$

$\frac{16}{20} = \frac{16}{20}$

So $\frac{4}{5}$ is equal to $\frac{16}{20}$.

(d) Is $\frac{1}{15}$ equal to $\frac{4}{30}$?

2	15, 30
3	15, 15
5	5, 5
	1, 1

Sol. Convert these fractions into like fractions. (LCM = 30)

$\frac{1}{15} \times \frac{2}{2} \Rightarrow \frac{2}{30}$

$\frac{4}{30} \times \frac{1}{1} \Rightarrow \frac{4}{30}$

$\frac{2}{30} \neq \frac{4}{30}$

So $\frac{1}{15}$ and not equal to $\frac{4}{30}$.

(c) Is $\frac{4}{5}$ equal to $\frac{16}{20}$?

2	5, 20
2	5, 10
5	5, 5
	1, 1

Sol. Convert these fractions into like fractions. (LCM = 20)

$\frac{4}{5} \times \frac{4}{4} \Rightarrow \frac{16}{20}$

$\frac{16}{20} \times \frac{1}{1} \Rightarrow \frac{16}{20}$

$\frac{16}{20} = \frac{16}{20}$

So $\frac{4}{5}$ is equal to $\frac{16}{20}$.

(d) Is $\frac{1}{15}$ equal to $\frac{4}{30}$?

2	15, 30
3	15, 15
5	5, 5
	1, 1

Sol. Convert these fractions into like fractions. (LCM = 30)

$\frac{1}{15} \times \frac{2}{2} \Rightarrow \frac{2}{30}$

$\frac{4}{30} \times \frac{1}{1} \Rightarrow \frac{4}{30}$

$\frac{2}{30} \neq \frac{4}{30}$

So $\frac{1}{15}$ and not equal to $\frac{4}{30}$.

(c) Is $\frac{4}{5}$ equal to $\frac{16}{20}$?

2	5, 20
2	5, 10
5	5, 5
	1, 1

Sol. Convert these fractions into like fractions. (LCM = 20)

$\frac{4}{5} \times \frac{4}{4} \Rightarrow \frac{16}{20}$

$\frac{16}{20} \times \frac{1}{1} \Rightarrow \frac{16}{20}$

$\frac{16}{20} = \frac{16}{20}$

So $\frac{4}{5}$ is equal to $\frac{16}{20}$.

(d) Is $\frac{1}{15}$ equal to $\frac{4}{30}$?

2	15, 30
3	15, 15
5	5, 5
	1, 1

Sol. Convert these fractions into like fractions. (LCM = 30)

$\frac{1}{15} \times \frac{2}{2} \Rightarrow \frac{2}{30}$

$\frac{4}{30} \times \frac{1}{1} \Rightarrow \frac{4}{30}$

$\frac{2}{30} \neq \frac{4}{30}$

So $\frac{1}{15}$ and not equal to $\frac{4}{30}$.

Q8: Ila read 25 pages of a book containing 100 pages. Lalita read $\frac{2}{5}$ of the same book. who read less?

Sol. Total number of pages = 100
Ila read 25 pages out of 100 pages
Fraction of reading the pages =) $\frac{25}{100} = \frac{1}{4}$
Lalita read $\frac{2}{5}$ part of the book =) $\frac{2}{5}$

$\frac{1}{4} < \frac{2}{5}$

Therefore, Ila read less.

Q9: Rafiq exercised for $\frac{3}{6}$ of an hour, while Rohit exercised for $\frac{3}{4}$ of an hour. who exercised for a longer time?

Sol. Rafiq exercised for $\frac{3}{6}$ of an hour.
Rohit exercised for $\frac{3}{4}$ of an hour.
Since $\frac{3}{4} > \frac{3}{6}$
Therefore, Rohit exercised for a longer time.

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Q6. In a class A of 25 students, 20 passed with 60% or more marks; in another class B of 30 students 24 passed with 60% or more marks. In which class was a greater fraction of students getting with 60% or more marks?

Sol. In class A, 20 passed out of 25 $\Rightarrow \frac{20}{25} \Rightarrow \frac{4}{5}$

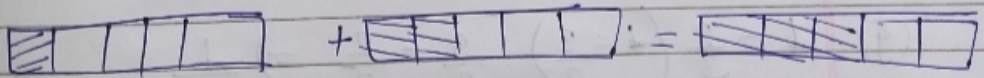
In class B, 24 passed out of 30 $\Rightarrow \frac{24}{30} \Rightarrow \frac{4}{5}$

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

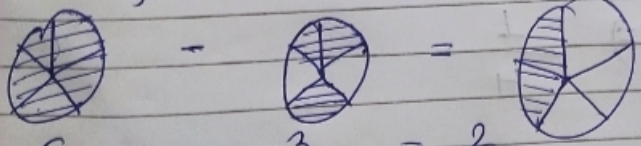
Hence, each class have same fraction of student getting 60% or more marks.

Ex - 7.5

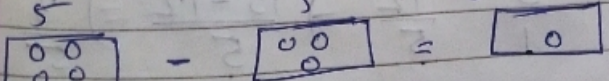
Q1. Write the fractions appropriately as additions or subtractions :-

(a) 

$\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$

(b) 

$\frac{5}{5} - \frac{3}{5} = \frac{2}{5}$

(c) 

$\frac{4}{6} - \frac{3}{6} = \frac{1}{6}$

Q2. Solve:-

(a) $\frac{1}{18} + \frac{1}{18} \Rightarrow \frac{2}{18} = \frac{1}{9}$

(b) $\frac{8}{15} + \frac{3}{15} \Rightarrow \frac{11}{15}$

(c) $\frac{7}{7} - \frac{5}{7} \Rightarrow \frac{2}{7}$

(d) $\frac{1}{22} + \frac{21}{22} \Rightarrow \frac{22}{22} = 1$

(e) $\frac{12}{15} - \frac{7}{15} \Rightarrow \frac{5}{15} = \frac{1}{3}$

(f) $\frac{5}{8} + \frac{3}{8} \Rightarrow \frac{8}{8} = 1$

(g) $1 - \frac{2}{3} \left(1 = \frac{3}{3}\right) \quad \frac{3}{3} - \frac{2}{3} \Rightarrow \frac{1}{3}$

(h) $\frac{1}{4} + \frac{0}{4} \Rightarrow \frac{1}{4}$

(i) $3 - \frac{12}{5} \Rightarrow \frac{3}{1} - \frac{12}{5} \Rightarrow \frac{15-12}{5} \Rightarrow \frac{3}{5}$

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Ex 7.5

Q3. Shubham painted _____ together?

Sol. Wall space painted by Shubham in a room = $\frac{2}{3}$

Wall space painted by Madhavi in a room = $\frac{1}{3}$

Total $\Rightarrow \frac{2}{3} + \frac{1}{3} \Rightarrow \frac{3}{3} = 1$

Q4. Fill in the missing fractions:-

(i) $\frac{7}{10} - \square = \frac{3}{10}$

Sol $\frac{7}{10} - \frac{3}{10} = \square$

$\frac{7-3}{10} = \square$

$\frac{4}{10} = \square$

$\square = \frac{4}{10}$

(ii) $\square - \frac{3}{21} = \frac{5}{21}$

$\square = \frac{5}{21} + \frac{3}{21}$

$\square \Rightarrow \frac{5+3}{21} = \frac{8}{21}$

(iii) $\square - \frac{3}{6} = \frac{3}{6}$

Sol. $\square = \frac{3}{6} + \frac{3}{6}$

$\square = \frac{3+3}{6} = \frac{6}{6}$

(iv) $\square + \frac{5}{27} = \frac{12}{27}$

$\square = \frac{12}{27} - \frac{5}{27}$

$\square = \frac{12-5}{27} = \frac{7}{27}$.

Q5. Javed was _____ basket?

Sol. Let Total Oranges in basket = 1

Fraction of oranges given to Javed = $\frac{5}{7}$

Fraction of oranges left in the basket

$\Rightarrow \frac{1}{1} - \frac{5}{7}$

$\Rightarrow \frac{7-5}{7} = \frac{2}{7}$

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Day 24 Nov 2020

Ex - 7.6

Q1. Solve:-

(a) $\frac{2}{3} + \frac{1}{7} \Rightarrow \frac{14+3}{21} \Rightarrow \frac{17}{21}$

3	3, 7
7	1, 7
	1, 1

(b) $\frac{3}{10} + \frac{7}{15} \Rightarrow \frac{9+14}{30} \Rightarrow \frac{23}{30}$

2	10, 15
5	5, 15
3	1, 3
	1, 1

(c) $\frac{4}{9} + \frac{2}{7} \Rightarrow \frac{28+18}{63} \Rightarrow \frac{46}{63}$

3	9, 7
3	3, 7
7	1, 7
	1, 1

(d) $\frac{5}{7} + \frac{1}{3} \Rightarrow \frac{15+7}{21} \Rightarrow \frac{22}{21}$

(e) $\frac{2}{5} + \frac{1}{6} \Rightarrow \frac{12+5}{30} \Rightarrow \frac{17}{30}$

(f) $\frac{4}{5} + \frac{2}{3} \Rightarrow \frac{12+10}{15} \Rightarrow \frac{22}{15}$

(g) $\frac{3}{4} - \frac{1}{3} \Rightarrow \frac{9-4}{12} \Rightarrow \frac{5}{12}$

(h) $\frac{5}{6} - \frac{1}{3} \Rightarrow \frac{15-6}{18} \Rightarrow \frac{9}{18} \; \frac{1}{2}$

(i) $\frac{2}{3} + \frac{3}{4} + \frac{1}{2}$

2	3, 4, 2
2	3, 2, 1
3	3, 1, 1
	1, 1, 1

Sol ⇒ $\frac{8+9+6}{12} \Rightarrow \frac{23}{12}$

(k) $1\frac{1}{3} + 3\frac{2}{3}$

Sol ⇒ $\frac{4}{3} + \frac{11}{3} \Rightarrow \frac{15}{3} = \frac{5}{1}$

(l) $4\frac{2}{3} + 3\frac{1}{4}$

Sol $\frac{14}{3} + \frac{13}{4} \Rightarrow \frac{56+39}{12} \Rightarrow \frac{95}{4}$

(j) $\frac{1}{2} + \frac{1}{3} + \frac{1}{6}$

2	2, 3, 6
3	1, 3, 3
	1, 1, 1

$\Rightarrow \frac{3+2+1}{6} \Rightarrow \frac{6}{6} = 1$

(m) $\frac{16}{5} - \frac{7}{5} \Rightarrow \frac{16-7}{5} \Rightarrow \frac{9}{5}$

(n) $\frac{4}{3} - \frac{1}{2} \Rightarrow \frac{8-3}{6} \Rightarrow \frac{5}{6}$

Day 27 Nov 2020

Ex - 7.6

Q2. Sarika bought _____ bought?

Sol. Ribbon length bought by ~~Sanil~~ Sarika $\Rightarrow \frac{2}{5}$ m.

Ribbon length bought by Lalita $= \frac{3}{4}$ m.

total length $\Rightarrow \frac{2}{5} + \frac{3}{4}$

$\Rightarrow \frac{8+15}{20} \Rightarrow \frac{23}{20}$ meter

Q3. Naina was _____ Of them.

Sol. fraction of cake Naina got $\Rightarrow 1\frac{1}{2} = \frac{3}{2}$

fraction of cake Najma got $\Rightarrow 1\frac{1}{3} = \frac{4}{3}$

total amount of cake $\Rightarrow \frac{3}{2} + \frac{4}{3}$

$\Rightarrow \frac{9+8}{6} \Rightarrow \frac{17}{6}$

$6\overline{)17}$ (2 ← 9, -12, 5 ← R)

$\Rightarrow 2\frac{5}{6}$

Q4. Fill in the boxes:-

a

(a) $\square + \frac{5}{8} = \frac{1}{4}$

Sol. $\square = \frac{1}{4} + \frac{5}{8}$

$\square \Rightarrow \frac{8+20}{32} \Rightarrow \frac{28}{32_8} \Rightarrow \frac{7}{8}$

(b) $\square - \frac{1}{5} = \frac{1}{2}$

$\square = \frac{1}{2} + \frac{1}{5} \Rightarrow \frac{5+2}{10} \Rightarrow \frac{7}{10}$

(c) $\frac{1}{2} - \square = \frac{1}{6}$

$-\square = \frac{1}{6} - \frac{1}{2} \Rightarrow \frac{2-6}{12} \Rightarrow \frac{-4}{12}$

$+\square = +\frac{1}{3}$

Q5. Complete the addition and subtraction box.

(a)

	(+)		
↑	$\frac{2}{3}$	$\frac{4}{3}$	$\frac{6}{3}$
(−)	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{3}{3}$
↓	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{3}{3}$

(b)

		(+)	
	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{5}{6}$
(−)	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{7}{12}$
	$\frac{1}{6}$	$\frac{1}{12}$	$\frac{3}{12}$

(iv) $\frac{1}{2} + \frac{1}{3} \Rightarrow \frac{3+2}{6} \Rightarrow \frac{5}{6}$

$\frac{1}{3} + \frac{1}{4} \Rightarrow \frac{4+3}{12} \Rightarrow \frac{7}{12}$

$\frac{1}{2} - \frac{1}{3} \Rightarrow \frac{3-2}{6} \Rightarrow \frac{1}{6}$

$\frac{1}{3} - \frac{1}{4} \Rightarrow \frac{4-3}{12} \Rightarrow \frac{1}{12}$

6	6, 12
2	1, 2
	1, 1

$\frac{5}{6} - \frac{7}{12} \Rightarrow \frac{10-7}{12} \Rightarrow \frac{3}{12}$

Q6. A piece _____ other piece?

Sol. Total length of wire $= \frac{7}{8}$ m.

Length of 1 piece of wire $= \frac{1}{4}$ m.

Length of other piece of wire $\Rightarrow \frac{7}{8} - \frac{1}{4}$

$\Rightarrow \frac{28-8}{32} \Rightarrow \frac{20}{32}$ (5, 8)

$\Rightarrow \frac{5}{8}$ m.

Q7

Sol

Q8.

Sol

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Q7. Nandini's house _____ she walk?

Sol. Distance of the school from house $= \frac{9}{10}$ km.

Distance she travelled by bus $= \frac{1}{2}$ km

Distance walked by Nandini $= \frac{9}{10} - \frac{1}{2}$

$\frac{9-5}{10} \Rightarrow \frac{4}{10} \; \frac{2}{5}$ km.

Q8. Asha _____ fraction?

Sol. Fraction of Asha's book shelf $= \frac{5}{6}$

Fraction of Samuel's book shelf $= \frac{2}{5}$

Convert these fraction into like fractions

$\frac{5}{6}$ & $\frac{2}{5}$ (LCM = 30)

$\frac{5}{6} \times \frac{5}{5} \Rightarrow \frac{25}{30}$ & $\frac{2}{5} \times \frac{6}{6} = \frac{12}{30}$

$\frac{25}{30} > \frac{12}{30}$

Asha's book shelf is more full than Samuel's book shelf. Difference $= \frac{5}{6} - \frac{2}{5}$

$\frac{25}{30} - \frac{12}{30} \Rightarrow \frac{13}{30}$

Q9. Jaider's _____ fraction?

Sol. Time taken by Jaider $\Rightarrow 2\frac{1}{5} \Rightarrow \frac{11}{5}$ min.

Time taken by Rahul $\Rightarrow \frac{7}{4}$ m.

Convert these fractions into like fractions:

$\frac{11}{5}$, $\frac{7}{4}$ [LCM = 20]

$\frac{11}{5} \times \frac{4}{4} \Rightarrow \frac{44}{20}$

$\frac{7}{4} \times \frac{5}{5} \Rightarrow \frac{35}{20}$

$\frac{44}{20} > \frac{35}{20}$

$\frac{11}{5} > \frac{7}{4}$

Rahul takes less time than Jaider.

Difference $\Rightarrow \frac{11}{5} - \frac{7}{4} \Rightarrow \frac{44}{20} - \frac{35}{20}$

$\Rightarrow \frac{9}{20}$ Ans.

Q22.

Sol

$\frac{25}{30} - \frac{12}{30} \Rightarrow \frac{13}{30}$

Q9. Jaider's _____ fraction?

Sol. Time taken by Jaider $\Rightarrow 2\frac{1}{5} \Rightarrow \frac{11}{5}$ min.

Time taken by Rahul $\Rightarrow \frac{7}{4}$ m.

Convert these fractions into like fractions:

$\frac{11}{5}$, $\frac{7}{4}$ [LCM = 20]

$\frac{11}{5} \times \frac{4}{4} \Rightarrow \frac{44}{20}$

$\frac{7}{4} \times \frac{5}{5} \Rightarrow \frac{35}{20}$

$\frac{44}{20} > \frac{35}{20}$

$\frac{11}{5} > \frac{7}{4}$

Rahul takes less time than Jaider.

Difference $\Rightarrow \frac{11}{5} - \frac{7}{4} \Rightarrow \frac{44}{20} - \frac{35}{20}$

$\Rightarrow \frac{9}{20}$ Ans.

Q22.

Sol