SNBP International & Senior Secondary School Chikhali, Pune.
Affiliation No. 1130703
Academic session 2024-25   Grade - IV
NOTES-4 (TERM-1)
Subject: MATHS
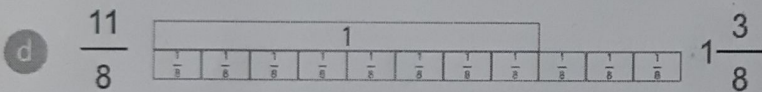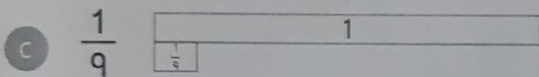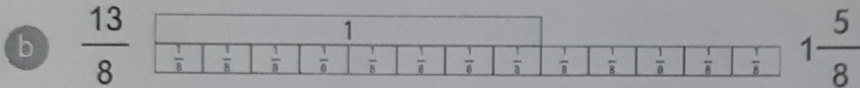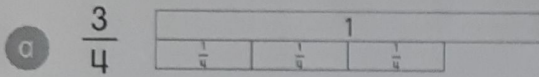Prepared by: Priyanka Gupta   LESSON - 5. Fractions

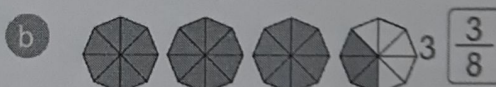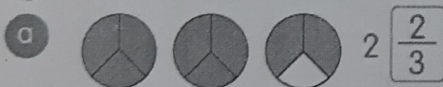**Pre activity – Lets Begin from T.B. (Pg. No. 138)**

T.B. Pg. No. 139

Concrete Stage

Use 'Fraction Tiles', represent the following fractions, and determine th
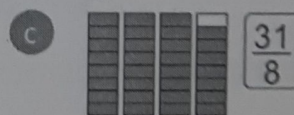improper fractions as mixed fractions.

a $\frac{3}{4}$

b $\frac{13}{8}$ $1\frac{5}{8}$

c $\frac{1}{9}$

d $\frac{11}{8}$ $1\frac{3}{8}$

e $\frac{9}{4}$ $2\frac{1}{4}$
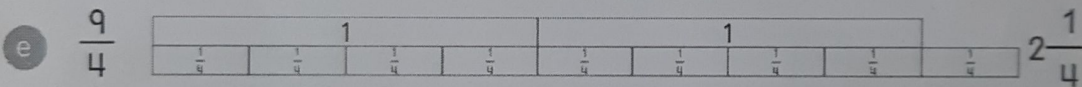
Pictorial Stage

1   Write a mixed fraction for each of the following.

a $2\frac{2}{3}$ b $3\frac{3}{8}$

2   Write an improper fraction for each of the following.

a $\frac{8}{5}$ b $\frac{15}{6}$ c $\frac{31}{8}$
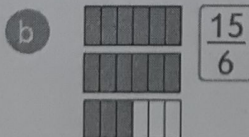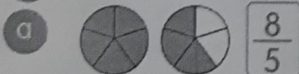
T.B. Pg. No. 140

Abstract Stage

Determine if each of the following is a proper fraction, improper fraction, or
mixed fraction.

(a) $\dfrac{8}{3}$ I   (b) $\dfrac{19}{4}$ I   (c) $\dfrac{2}{5}$ P   (d) $5\dfrac{2}{7}$ M   (e) $3\dfrac{5}{9}$ M   (f) $\dfrac{5}{8}$ P

T.B. Pg. No. 142

Concrete Stage

1. Use 'Fraction Tiles' to compare the given fractions, and fill in the boxes with < or >.

(a) $\dfrac{6}{7}$ > $\dfrac{5}{7}$ (b) $\dfrac{3}{8}$ < $\dfrac{5}{8}$ (c) $\dfrac{1}{3}$ < $\dfrac{2}{3}$

2. Use 'Fraction Tiles' to arrange these fractions from the least to the greatest.
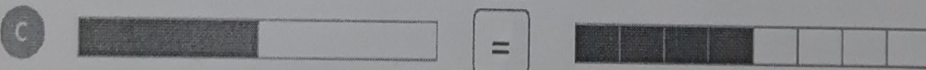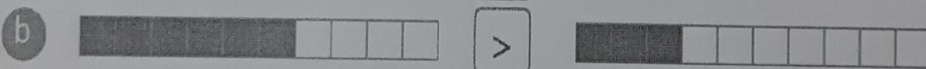
(a) $\dfrac{3}{9}, \dfrac{3}{6}, \dfrac{1}{4}$ $\dfrac{1}{4} < \dfrac{3}{9} < \dfrac{3}{6}$

(b) $\dfrac{2}{3}, \dfrac{3}{6}, \dfrac{1}{6}$ $\dfrac{1}{6} < \dfrac{3}{6} < \dfrac{2}{3}$

(c) $\dfrac{6}{4}, \dfrac{3}{2}, \dfrac{8}{3}$ $\dfrac{6}{4} = \dfrac{3}{2} < \dfrac{8}{3}$

Pictorial Stage

1. Compare the given fractions.

(a)   <

(b)   >

(c)   =
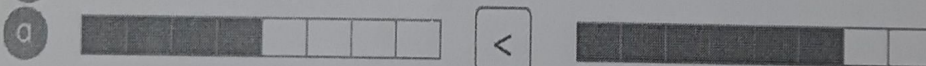
2. Colour the fraction tiles to arrange the fractions $\dfrac{2}{3}$, $\dfrac{1}{4}$ and $\dfrac{7}{8}$ on the number line.

Abstract Stage

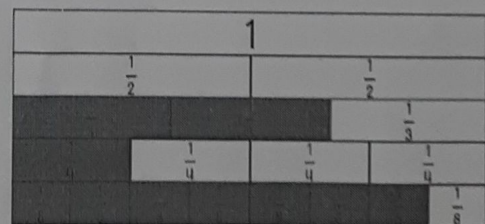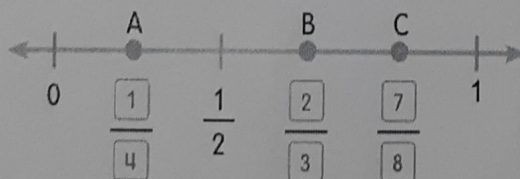**1** Arrange the following fractions in increasing order.

a) $\frac{2}{6}, \frac{2}{3}, \frac{2}{8}$ $\frac{2}{8} < \frac{2}{6} < \frac{2}{3}$

b) $\frac{4}{5}, \frac{2}{5}, \frac{3}{5}$ $\frac{2}{5} < \frac{3}{5} < \frac{4}{5}$

c) $\frac{3}{5}, \frac{18}{20}, \frac{60}{80}$ $\frac{3}{5} < \frac{60}{80} < \frac{18}{20}$

2 Arrange the following fractions in decreasing order.

a) $\frac{42}{80}, \frac{14}{20}, \frac{3}{5}$ $\frac{14}{20} > \frac{3}{5} > \frac{42}{80}$

b) $\frac{4}{12}, \frac{1}{2}, \frac{4}{6}$ $\frac{4}{6} > \frac{1}{2} > \frac{4}{12}$

c) $\frac{1}{3}, \frac{1}{6}, \frac{1}{5}$ $\frac{1}{3} > \frac{1}{5} > \frac{1}{6}$
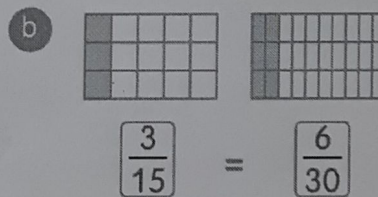
T.B. Pg. No. 143

Concrete Stage

Use 'Fraction Tiles', and circle all the equivalent fractions of $\frac{1}{4}$.

a) $\frac{2}{4}$ b) $\left(\frac{2}{8}\right)$ c) $\frac{4}{6}$ d) $\left(\frac{3}{12}\right)$ e) $\frac{6}{9}$ f) $\frac{8}{10}$ g) $\left(\frac{4}{16}\right)$

Pictorial Stage

1 Use the bar model representations to write an equivalent fractions.

a) $\frac{2}{10} = \frac{1}{5}$

b) $\frac{3}{15} = \frac{6}{30}$
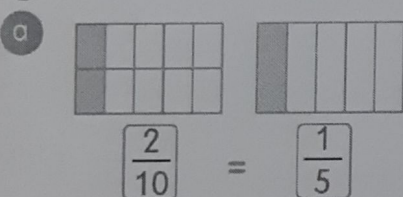
2 Draw bar models to show these fractions are equivalent.

a) $\frac{4}{8}, \frac{2}{4}$

b) $\frac{1}{6}, \frac{3}{18}$

c) $\frac{6}{12}, \frac{1}{2}$
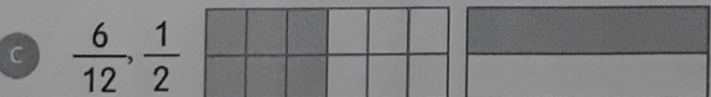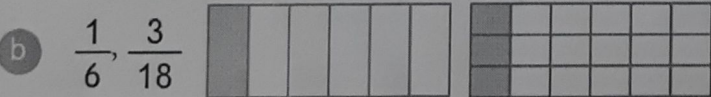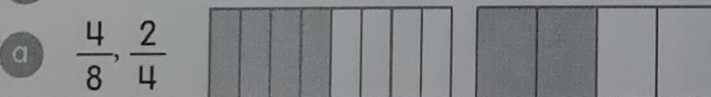
Abstract Stage

1 Find the equivalent fractions by division method.

(a) $\dfrac{20}{24} = \dfrac{5}{6}$

(b) $\dfrac{42}{48} = \dfrac{7}{8}$

(c) $\dfrac{8}{64} = \dfrac{1}{8}$

(d) $\dfrac{16}{28} = \dfrac{4}{7}$

(e) $\dfrac{35}{21} = \dfrac{5}{3}$

(f) $\dfrac{54}{36} = \dfrac{3}{2}$

2 Draw models of 2 pizzas with a different number of equal pieces. Use shading to show $\dfrac{1}{4}$ of each pizza.

T.B. Pg. No. 145
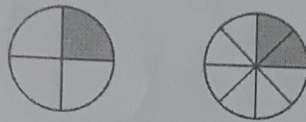
Blooming Questions

1 Write a numerator and match the fraction to its type.

(a) $\dfrac{6}{12}$ — Proper fraction

— Improper fraction

(c) $\dfrac{9}{7}$ — Mixed fraction

— Unit fraction

(b) $\dfrac{1}{5}$

(d) $2\dfrac{2}{4}$

2 Peter is trying to represent $\dfrac{4}{6}$ as $\dfrac{2}{3}$ and $\dfrac{8}{12}$ but unable to understand when to combine and break the model. Now help him by drawing models of the same.
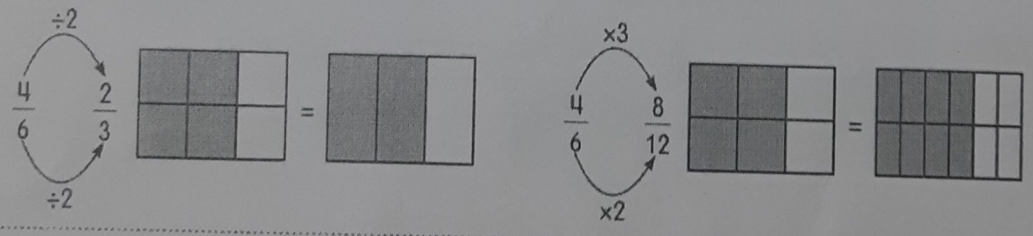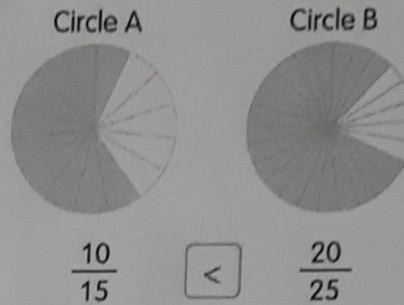
3 Leena has two same-size circles divided into equal parts.

Circle A has $\dfrac{10}{15}$ of the parts shaded, and

Circle B has $\dfrac{20}{25}$ of the parts shaded.

Complete the comparison statement.

Circle A   Circle B

$\dfrac{10}{15}$ $\boxed{<}$ $\dfrac{20}{25}$

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4 Neeraj says the common denominator for $\dfrac{1}{2}$ and $\dfrac{2}{3}$ is 5. Is Neeraj right? Explain your answer.

Answer: No. as 5 does not comes in time tables of 2 and 3. So, 5 cannot be its common denominator.

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5 Andy cut a pizza and a cake into a total of 10 same-size pieces. He cut the pizza into 4 more pieces than the cake. Andy ate 6 pieces of the pizza. What fraction of the pizza did he eat?

Hintometer: If he cut the cake into 2 slices, how many slices of the pizza would be there? Add the total slices to see if the sum equals 10. Try cutting the cake in 3 slices.

Answer: $\dfrac{3}{7} \Leftarrow \dfrac{6}{14}$

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6 Circle the fraction with the greatest value.

$\dfrac{2}{8}$, $\dfrac{1}{8}$, $\boxed{\dfrac{2}{4}}$, $\dfrac{2}{6}$

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7 Meera's mother gave her a recipe for nut trail mix.

$\dfrac{3}{4}$ cup cashews, $\dfrac{2}{3}$ cup almonds, $\dfrac{1}{4}$ cup peanuts, and

$\dfrac{1}{2}$ cup raisins.

Arrange the ingredients used in the recipe from the least to the greatest.

Answer: $\dfrac{1}{4} < \dfrac{1}{2} < \dfrac{2}{3} < \dfrac{3}{4}$

T.B. Pg. No. 146

Mental Maths

Fill in the boxes with >, < or = symbols.

a) $\dfrac{3}{4}$ $\boxed{=}$ $\dfrac{12}{16}$ b) $\dfrac{6}{15}$ $\boxed{>}$ $\dfrac{1}{3}$ c) $\dfrac{8}{6}$ $\boxed{=}$ $1\dfrac{1}{3}$

d) $\dfrac{30}{10}$ $\boxed{>}$ $\dfrac{1}{3}$ e) $\dfrac{4}{5}$ $\boxed{>}$ $\dfrac{1}{2}$ f) $\dfrac{56}{49}$ $\boxed{=}$ $\dfrac{8}{7}$

Post activity-

1 Fill in the boxes to make these fractions equivalent.

a $\times 3$

$$\frac{2}{5} = \frac{6}{15}$$

$\times 3$

b $\times 2$

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

$\times 2$

c $\times 9$

$$\frac{1}{2} = \frac{9}{18}$$

$\times 9$

d $\times 4$

$$\frac{9}{4} = \frac{36}{16}$$

$\times 4$

e $\div 5$

$$\frac{35}{20} = \frac{7}{4}$$

$\div 5$

f $\div 6$

$$\frac{30}{48} = \frac{5}{8}$$

$\div 6$

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