

Subject: MATHS

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Class 4

Lesson 8B **Decimals and Fractions**

Dear students

Today you will know how to get Equivalent Fractions. Equivalent means same value. Same fractional number are called Equivalent Fractions. See the example:-

EQUIVALENT FRACTIONS

Fractions which indicate the same fractional number are said to be equivalent fractions.

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

The shaded part of all the figures are equal in size.

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

Finding Equivalent Fraction

Ex- Find three equivalent fractions of

(a) $\frac{2}{3}$ (b) $\frac{12}{24}$

Hint:- To find a fraction equivalent to the given fraction by multiplying or dividing the numerator or denominator of the given fraction by the same number.

equivalent fraction of

$$(a) \frac{2}{3} = \frac{2}{3} \times \frac{2}{2} = \frac{4}{6}$$

$$\frac{2}{3} \times \frac{3}{3} = \frac{6}{9}$$

$$\frac{2}{3} \times \frac{4}{4} = \frac{8}{12}$$

$$(b) \frac{12}{24} = \frac{12}{24} \div \frac{2}{2} = \frac{6}{12}$$

$$\frac{12}{24} = \frac{12}{24} \div \frac{3}{3} = \frac{4}{8}$$

$$\frac{12}{24} = \frac{12}{24} \div \frac{4}{4} = \frac{3}{6}$$

So, two fractions are equivalent fractions

$$\left(\frac{a}{b} = \frac{c}{d} \Rightarrow a \times d = b \times c \right)$$

Numerator of the 1st fraction \times

Denominator of the 2nd fraction

= Denominator of the 1st fraction \times

Numerator of the 2nd fraction.

Ex- Check whether $\frac{2}{5}$ and $\frac{6}{15}$ are equivalent fractions or not.

Solution: $\Rightarrow \frac{2}{5}$ and $\frac{6}{15}$

$$2 \times 15 = 6 \times 5 \\ = 30 = 30$$

So $\frac{2}{5}$ and $\frac{6}{15}$ are equivalent fractions.

Home assignments:-

Exercise 8B

1. Write down the next five equivalent fractions.

a $\frac{1}{4}, \frac{2}{8},$ _____, _____, _____, _____, _____

b $\frac{2}{5}, \frac{4}{10},$ _____, _____, _____, _____, _____

c $\frac{1}{6}, \frac{2}{12},$ _____, _____, _____, _____, _____

d $\frac{1}{2}, \frac{2}{4}, \frac{3}{6},$ _____, _____, _____, _____, _____

e $\frac{3}{7}, \frac{6}{14},$ _____, _____, _____, _____, _____

2. Fill in the blanks.

a $\frac{\square}{5} = \frac{12}{30}$ b $\frac{1}{4} = \frac{4}{\square}$ c $\frac{9}{11} = \frac{\square}{33}$

d $\frac{3}{8} = \frac{18}{\square}$ e $\frac{3}{5} = \frac{18}{\square}$ f $\frac{5}{7} = \frac{30}{\square}$

3. Check whether the following fractions are equivalent.

a $\frac{21}{48}, \frac{3}{9}$ b $\frac{3}{5}, \frac{6}{10}$ c $\frac{1}{8}, \frac{4}{24}$

d $\frac{4}{11}, \frac{12}{33}$ e $\frac{7}{13}, \frac{35}{63}$ f $\frac{5}{11}, \frac{25}{50}$

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