

STD – 10

MATHS

CHAPTER - 1

REAL NUMBER

EXERCISE - 1.4 Q-1 (6 to 10)

(vi) $\frac{23}{2^3 5^2}$

Clearly, the denominator is in the form of $2^m \times 5^n$.

Hence, $\frac{23}{2^3 5^2}$ has a terminating decimal expansion.

(vii) $\frac{129}{2^2 5^7 7^5}$

As you can see, the denominator is not in the form of $2^m \times 5^n$.

Hence, $\frac{129}{2^2 5^7 7^5}$ has a non-terminating decimal expansion.

(viii) $\frac{6}{15}$

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

Since, the denominator has only 5 as its factor,

thus, $\frac{6}{15}$ has a terminating decimal expansion.

(ix) $\frac{35}{50}$

$$\frac{35}{50} = \frac{7}{10}$$

Factorising the denominator, we get,

2	50
5	25
5	5
	1

$$10 = 2 \times 5$$

Since, the denominator is in the form of $2^m \times 5^n$

thus, $\frac{35}{50}$ has a terminating decimal expansion.

$$(x) \frac{77}{210}$$

$$= \frac{77}{210}$$

$$= \frac{(\cancel{7} \times 11)}{(30 \times \cancel{7})}$$

$$= \frac{11}{30}$$

Factorising the denominator, we get,

2	210
3	105
5	35
7	7
	1

$$\mathbf{30 = 2 \times 3 \times 5}$$

As you can see, the denominator is not in the form of

$2^m \times 5^n$ Hence, $\frac{.77}{210}$ has a non-terminating decimal expansion.

Thanks



For watching