Exercise 1B

Questions 1:

(i) $\frac{11}{2^3 \times 3}$

Its denominator, $(2^3 \times 3) \neq (2^m \times 5^n)$

$\therefore$ it is a non – terminating repeating decimal

(ii) $\frac{73}{2^2 \times 3^3 \times 5}$

Its denominator, $(2^2 \times 3^3 \times 5) \neq (2^m \times 5^n)$

$\therefore$ it is a non – terminating repeating decimal

(iii) $\frac{9}{35} = \frac{9}{5 \times 7}$

Its denominator, $(5 \times 7) \neq (2^m \times 5^n)$

$\therefore$ it is a non terminating repeating decimal

(iv) $\frac{32}{147} = \frac{32}{7 \times 3 \times 7} = \frac{32}{3 \times 7^2}$

Its denominator, $(3 \times 7^2) \neq (2^m \times 5^n)$

$\therefore$ it is a non- terminating repeating decimal

(v) $\frac{64}{455} = \frac{64}{5 \times 7 \times 13}$

Its denominator, $(5 \times 7 \times 11) \neq (2^m \times 5^n)$

$\therefore$ it is a non – terminating repeating decimal

(vi) $\frac{77}{210} = \frac{77}{3 \times 2 \times 5 \times 7}$

Its denominator, $(2 \times 3 \times 5 \times 7) \neq (2^m \times 5^n)$

$\therefore$ it is a non – terminating repeating decimal

(vii) $\frac{29}{343} = \frac{29}{7 \times 7 \times 7} = \frac{29}{7^3}$

Its denominator, $(7^3) \neq (2^m \times 5^n)$

$\therefore$ it is a non – terminating repeating decimal

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

Its denominator, $(2^2 \times 5^7 \times 7^5) \neq (2^m \times 5^n)$

$\therefore$ it is a non – terminating repeating decimal

Questions 2:

(i) $\frac{23}{2^3 \times 5^2}$ has 2 and 5 as factors in denominator

$$\frac{23}{2^3 \times 5^2} = \frac{23}{2 \times 100} = \frac{11.5}{100} = 0.115$$

(ii) $\frac{24}{125} = \frac{24}{5^3}$ has 5 as its factor in denominator

$$\frac{24 \times 8}{125 \times 8} = \frac{192}{1000} = 0.192$$

(iii) $\frac{170}{320} = \frac{17}{2^6 \times 5}$ has 2 and 5 as factors in the denominator.

$$\frac{17}{32 \times 10} = \frac{17 \times 5^5}{2^5 \times 5^5 \times 10} = \frac{53125}{10^5 \times 10} = 0.053125$$

(iv) $\frac{171}{800} = \frac{171}{2^5 \times 5^2}$ has 2 and 5 as its factors in the denominator

$$\frac{171}{2^5 \times 5^2} = \frac{171 \times 5^3}{2^5 \times 5^2 \times 5^3} = \frac{21375}{10^5} = 0.21375$$

(v) $\frac{15}{1600} = \frac{15}{2^6 \times 5^2}$ has 2 and 5 as its factors in the denominator

$$\frac{15}{2^6 \times 5^2} = \frac{15 \times 5^4}{2^6 \times 5^2 \times 5^4} = \frac{9375}{10^6} = 0.0099375$$

(vi) $\frac{19}{3125} = \frac{19}{5^5}$ has 5 as its factors denominator

$$\frac{19}{5^5} = \frac{19 \times 2^5}{5^5 \times 2^5} = 0.00608$$

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