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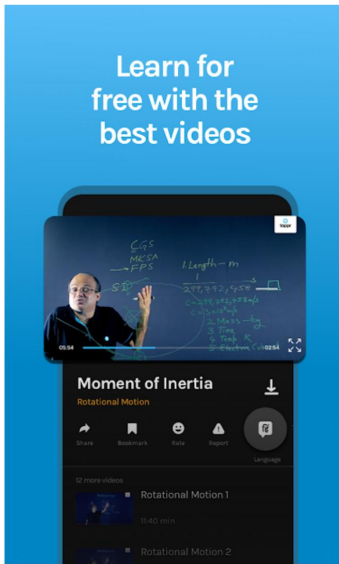
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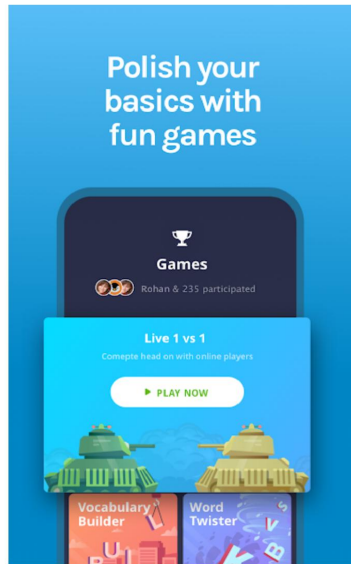


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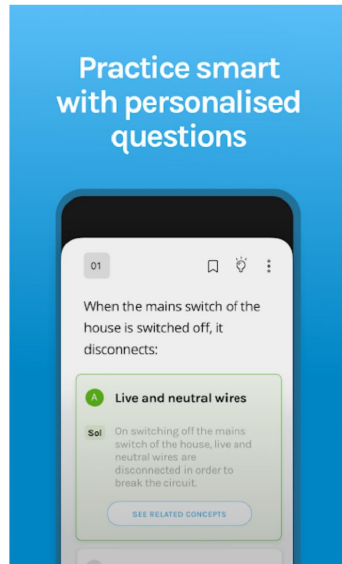
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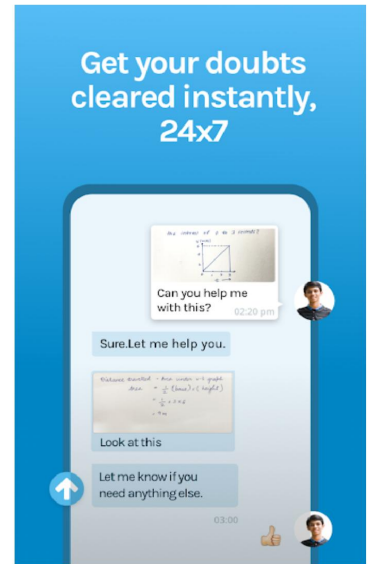
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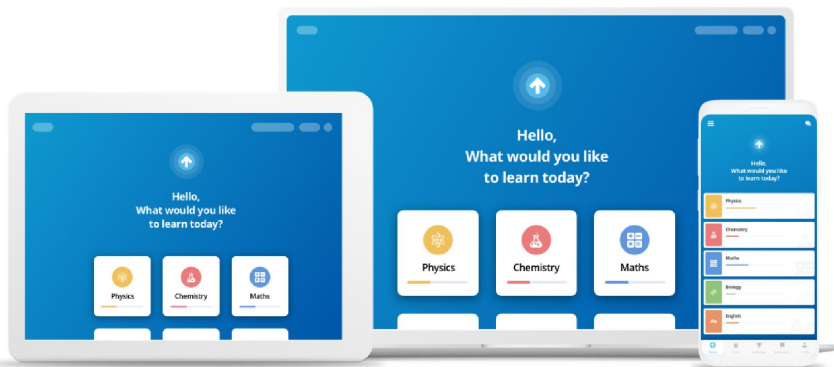
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#463102**Topic:** Rational Numbers and Properties

Write the additive inverse of each of the following.

(i) $\frac{2}{8}$ (ii) $\frac{-5}{9}$ (iii) $\frac{-6}{-5}$ (iv) $\frac{2}{-9}$ (v) $\frac{19}{-6}$

SolutionAdditive inverse of $\frac{a}{b}$ is $-\frac{a}{b}$, since $\frac{a}{b} + \left(-\frac{a}{b}\right) = 0$

In the same manner:

(i)

Additive inverse of $\frac{2}{8}$ is $-\frac{2}{8}$

(ii)

Additive inverse of $\frac{-5}{9}$ is $\frac{5}{9}$

(iii)

Additive inverse of $\frac{-6}{-5}$ is $\frac{-6}{5}$

(iv)

Additive inverse of $\frac{2}{-9}$ is $\frac{2}{9}$

(v)

Additive inverse of $\frac{19}{-6}$ is $\frac{19}{6}$

#463103**Topic:** Rational Numbers and Properties

Find the multiplicative inverse of the following.

(i) -13

(ii) $\frac{1}{5}$

(iii) $\frac{-5}{8} \times \frac{-3}{7}$

(iv) $-1 \times \frac{-2}{5}$

(v) -1

SolutionMultiplicative inverse of a number P is $\frac{1}{P}$ as $P \times \frac{1}{P} = 1$

i) Multiplicative inverse of -13 is $-\frac{1}{13}$

ii) Multiplicative inverse of $\frac{1}{5}$ is 5

iii) $\frac{-5}{8} \times \frac{-3}{7} = \frac{15}{56}$

Multiplicative inverse = $\frac{56}{15}$

iv) $\frac{-2}{5} \times -1 = \frac{2}{5}$

Multiplicative inverse = $\frac{5}{2}$

v) Multiplicative inverse of -1 is -1 .

#463107

Topic: Rational Numbers and Properties

Multiply $\frac{6}{13}$ by the reciprocal of $\frac{-7}{16}$.

Solution

Reciprocal of $\frac{-7}{16}$ is $\frac{16}{-7}$

Now,

$$\frac{6}{13} \times \frac{16}{-7} = \frac{-96}{91}$$

#463111

Topic: Rational Numbers and Properties

Is $\frac{8}{9}$ the multiplicative inverse of $-1\frac{1}{8}$? Why or why not?

Solution

If it is a multiplicative inverse, then the product = 1

$$\frac{8}{9} \times \left(-1\frac{1}{8}\right) = \frac{8}{9} \times \frac{-9}{8} = -1$$

Product = -1

∴ It is not a multiplicative inverse.

#463112

Topic: Rational Numbers and Properties

Is 0.3 the multiplicative inverse of $3\frac{1}{3}$? Why or why not?

Solution

$$3\frac{1}{3} = \frac{10}{3}$$

If it is a multiplicative inverse of $3\frac{1}{3}$ then the product should be 1

$$0.3 \times \frac{10}{3} = \frac{3}{10} \times \frac{10}{3} = 1$$

Product = 1

∴ 0.3 is a Multiplicative Inverse of $3\frac{1}{3}$.

#463113

Topic: Rational Numbers and Properties

Write.

- (i) The rational number that does not have a reciprocal.
- (ii) The rational numbers that are equal to their reciprocals.
- (iii) The rational number that is equal to its negative.

Solution

- (i) The rational number that does not have reciprocal is zero.
- (ii) 1, and -1 (Both are equal to their reciprocals)
- (iii) The rational number that is equal to its negative = 0

#463114

Topic: Rational Numbers and Properties

Fill in the blanks.

- (i) Zero has _____ reciprocal.
- (ii) The numbers _____ and _____ are their own reciprocals.
- (iii) The reciprocal of -5 is _____.
- (iv) Reciprocal of $\frac{1}{x}$, where $x \neq 0$ is _____.
- (v) The product of two rational numbers is always a _____.
- (vi) The reciprocal of a positive rational number is _____.

Solution

- i) Zero has No reciprocal.
- (ii) The numbers 1 and -1 are their own reciprocals.
- (iii) The reciprocal of -5 is $\frac{-1}{5}$.
- (iv) Reciprocal of $\frac{1}{x}$, where $x \neq 0$ is x .
- (v) The product of two rational numbers is always a Rational Number.
- (vi) The reciprocal of a positive rational number is Positive Rational Number.

#463146

Topic: Integers

I purchased a hair-dryer for Rs. 5,400 including 8% VAT. Find the price before VAT was added.

Solution

Let the price of the hairdryer before VAT be Rs x .

$$\text{So, } 1.08 \times x = 5400$$

$$x = \frac{5400}{1.08} = \text{Rs } 5000$$

So, the cost of the hair dryer before VAT is Rs 5000