

EduFest Academy, Junior, Pune

Linear Equations in One Variable

Q.1. MCQ

- What should be added to $-\frac{7}{3}$ to get $\frac{3}{7}$?
a) $\frac{21}{58}$ b) $\frac{58}{21}$ c) $\frac{47}{21}$ d) $\frac{50}{21}$
- The perimeter of the rectangle is 20cm. If the length of the rectangle is 6cm, then its breadth will be:
a) 4 cm b) 6 cm c) 10 cm d) 14 cm
- The age of the father is three times the age of the son. If the age of the son is 15 years old, then the age of the father is:
a) 50 years b) 55 years c) 40 years d) 45 years
- The difference between two whole numbers is 66. The ratio of the two numbers is 2: 5. The two numbers are:
a) 60 and 6 c) 110 and 44
b) 100 and 33 d) 99 and 33

Q.2. Solve

- $\frac{(2+x)(x-7)}{(x-5)(x+4)} = 1$
- $\frac{x+3}{2} - \frac{x-2}{2} = 1$. Hence find p, if $\frac{1}{x} + p = 1$
- $\frac{3(7x-1)}{4} - (2x - \frac{1-x}{2}) = x + \frac{3}{2}$
- $\frac{9x-7}{3x+5} = \frac{3x-4}{x+6}$
- $5 - 3(5x+2) = 4(7-3x) + 1$
- $\frac{6x+1}{3} + 1 = \frac{x-3}{6}$

Q.3. LONG ANSWER TYPE QUESTIONS

- The two perpendicular sides of a right angled triangle are in the ratio 3:4 and its perimeter is 96 cm. Find the three sides.
- Two supplementary angles differ by 50° . Find measure of each angle.
- Sum of three consecutive even numbers is 36. Find the numbers.

4. The numerator of a fraction is 2 less than the denominator. If 3 is added to both the numerator the fraction becomes $\frac{3}{4}$. Find the fraction.
5. A number consists of two digits whose sum is 12. If 18 is added to the number, the digits are reversed. Find the number.
6. Maira has a total of ₹ 1040 as currency notes in the denomination of ₹ 10, ₹ 20 and ₹ 50. The ratio of the number of ₹ 10 notes and ₹ 20 notes is 2:5. If she has a total of 30 notes, how many notes of each denomination she has.
7. A number is such that ratio of 84 less than the number and difference of 108 and the number is 1:1. Find the number.
8. Mr. X has to cover a certain distance. He covers $\frac{2}{5}$ th of the total distance by car, $\frac{3}{10}$ th by bus, $\frac{1}{5}$ th by autorickshaw and the remaining 5km on foot. What is the total distance?
9. A rectangle's length is 5 cm less than twice its width. If the length is decreased by 5 cm and width is increased by 2 cm; the perimeter of the resulting rectangle will be 74 cm. Find the length and the width of the original rectangle.
10. A man is 42 years old and his son is 12 years old. In how many years will the age of the son be half the age of the man at that time?

