MATHS

BOOKS - CAMBRIDGE MATHS (KANNADA ENGLISH)

LINEAR EQUATIONS IN TWO VARLABLES

Exercise 10 1

1. The cost of a notebook is twice, the cost of pen. Write a linear equation in two variables, to represent this statement. (Take the cost of a notebook to be rs. x that of a pen to be rs. Y)

2. Express the following linear equations in the form of ax+ by+c=0 and indicate the value of a, b and c in each case.

(i) $2x + 3y = 9.3\overline{5}$

(ii) $x - y/5 - 10 = 0$

(iii) $-2x + 3y - 6 = 0$

(iv) $x = 3y$

(v) $2x = -5y$

(vi) $3x + 2 = 0$

(vii) $y - 2 = 0$

(viii) $5 = 2x$

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Exercise 10 2

1. Which one of the following options is true and why? Y = 3x +5, has

(i) unique solution

(ii) only two solutions.

(iii) infinitely many solutions.

2. Write four solutions for each of the following equations: (i) 2x + y = 7

(ii) π x+y = 9

(iii) x = 4y

3. Check which of the following are solutions of the equation x - 2y = 4 and with are not :

(i) x-2y = 4

(ii) (2,0)

(iii) (4,0)

(iv) $\left(\sqrt{2}, 4\sqrt{2}\right)$

(v) (1,1)

4. Find the value of k, if $x = 2, y = 1$ is a solution of the equation $2x + 3y = k$.

Exercise 10 3

1. Draw the graph of each of the following linear equations in two variables.

(i) x + y = 4

(ii) x-y = 2

(iii) y = 3x

(iv) 3 = 2x + y.

2. Give the equations of two lines passing through (2,14). How many more such lines are there and why ?

3. If the point (3,4) lines on the graph of the equation $3y = ax + 7$, find the value of a.

4. The taxi fare in a city is as follows, for the first kilometre, the fare is Rs. 8 and for the subsequent distance it is Rs. 5 per km. Taking the distance covered as x km and total fare as Rs y, write a linear equation for this information and draw its graph.

5. From the choices given below, choose the equation whose graphs are given in Fig. 4.6and Fig. 4.7.For Fig.4.6(i) $y = x$ (ii) $x + y = 0$ (iii) $y = 2x$ (iv) $2 + 3y = 7x$For Fig.4.7.(i) $y = x + 2$ (ii) $y = x - 2$ (iii) $y = -x + 2$ (iv) `x+2

6. If the work done by a body in application of a constant force is directly proportional to the distance travelled by the body, express this in the form of an equation in two variables and draw the graph of the same by taking the constant force as 5 units. Also, send from the graph the work done when the distance travelled by the body is

2 units.

7. Yamini and Fatima, two students of Class IX of a school, together contributed Rs 100 towards the Prime Minister's Relief Fund to help the earthquake victims. Write a linear equation which satisfies this data. (You may take their contributions as

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8. In countries like USA and Canada, temperature is measured in Fahrenheit, whereas incountries like India, it is measured

in Celsius. Here is a linear equation that convertsFahrenheit to Celsius:

$$F = \left(\frac{9}{5}\right)C + 32$$(i) Draw the graph of the linear eq

Exercise 10 4

1. Give geometric representation of y=3 as an equation

in one variable

2. Give the geometric representation of 2x+9=0

as an equation

in one variable.