



Silent Bells



ഫസ്റ്റ് ബെൽ - അനുബന്ധ പഠനസഹായകസാമഗ്രി

Class: 10

Subject: Mathematics

Date: 13-10-2020

WorksheetNo: 33

Lesson : Second Degree Equations

Activity: 1

In figure, the chords AB and CD are extended to meet at P. AB= 6 cm, CD= 3 cm, PC= 5 cm.

a) If PA = x, PB = -----

b) PA X ----- = PC X -----

c) x X ----- = 5 X 8

d) $x^2 + \text{-----} = 40$

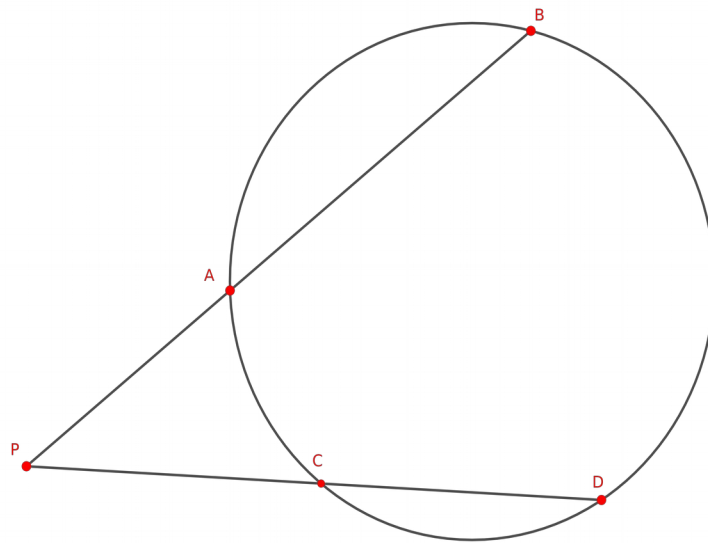
e) $x^2 + \text{-----} + \text{-----} = 40 + \text{-----}$

f) $(x + \text{-----})^2 = \text{-----}$

g) $x + \text{-----} = \text{-----}$

h) $x = \text{-----}$

i) PA = -----, PB = -----



Activity: 2

One side of a rectangle is 2cm longer than the other side and its area is 168 square centimetres. What are the lengths of the sides?



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Activity: 3

A rod 32 cm long is to be bent to make a rectangle. Its area is 60cm^2 . Calculate the lengths of the sides?

Activity: 4

A 2m wide portion is taken from the eastern side of a square shaped playground to make a road. The area of the remaining portion is 440 square metres. What are the length and breath of the remaining portion ?



2 m

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Class:10

Subject:Maths

Date:16/10/2020

WorksheetNo:34

LESSON:SECOND DEGREE EQUATIONS

Activity:1

The product of a number and 4 added to it ,gives 221.What are the numbers?

Activity:2

In a right angled triangle, one of the perpendicular sides is 2 cm longer than the other side and its area is 24cm^2 . What are the lengths of its sides?

Activity:3

16 added to the sum of the first few terms of the arithmetic sequence 9,11,13.....gives 256. How many terms are added ?

Activity:4

The length of a rectangle is 3 cm more than thrice its breadth. Its diagonal is 1 cm more than the length. What are the length and breadth of the rectangle ?

(Hint:Let the breadth= x and length= $3x+3$)

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Class: 10

Subject: Maths

Date: 19-10-20

Worksheet No: 35

Lesson : Second Degree Equations

Activity 1

Find two numbers with sum 10 and product 20.

$$\text{sum} = 10$$

if first number is x ,

then second number = $10 - \dots$

$$\text{product} = 20$$

$$\text{then, } x(10 - \dots) = 20$$

$$10x - \dots = \dots$$

$$-x^2 + 10x = \dots$$

$$x^2 - 10x = \dots$$

$$x^2 - 10x + \dots = \dots + 5^2$$

$$(x - 5)^2 = \dots$$

$$(x - 5) = \pm \sqrt{\dots}$$

$$x = 5 \pm \sqrt{\dots}$$

$$\text{if } x = 5 + \sqrt{\dots}$$

$$\text{first number} = x = 5 + \sqrt{\dots}$$

$$\text{second number} = 10 - (5 + \sqrt{\dots})$$

$$= 5 - \sqrt{\dots}$$

$$\text{if } x = 5 - \sqrt{\dots}$$

$$\text{first number} = x = 5 - \sqrt{\dots}$$

$$\text{second number} = 10 - (5 - \sqrt{\dots})$$

$$= 5 + \sqrt{\dots}$$

Activity 2

If the sum and product of two numbers are 6, find the numbers.



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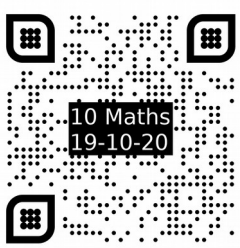
Activity3

The sum of first few terms of the arithmetic sequence 3, 5, 7,is 224. Find the number of terms.

Activity 4

A rod 56 cm long is to be bent to make a rectangle.

- Can a rectangle of diagonal 10 cm be made?
- Can a rectangle of diagonal 20 cm be made?

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Class:10

Subject: Maths

Date:20-10-2020

Worksheet No: 36

Lesson & LO :Second Degree Equations, Equations and Polynomials

To get $ax^2 + bx + c = 0$, we must take $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

Find the values of x in the second degree equation $2x^2 + 7x + 3 = 0$

$$2x^2 + 7x + 3 = 0$$

$$a=2, b=7, c=3$$

$$b^2 - 4ac = 7^2 - 4 \times 2 \times 3$$

$$= 49 - 24 = 25$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$= \frac{-7 \pm \sqrt{25}}{2 \times 2}$$

$$= \frac{-7 \pm 5}{4}$$

$$x = \frac{-7 + 5}{4} = \frac{-2}{4} = \frac{-1}{2}$$

OR

$$x = \frac{-5 - 7}{4} = \frac{-12}{4} = -3$$

Therefore, $x = \frac{-1}{2}, -3$

KUTTIPPURAM Sub dist.



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Find the values of x in the following second degree equations.

1) $x^2 + 5x + 6 = 0$

2) $2x^2 + 9x + 4 = 0$

3) $4x^2 + 13x + 3 = 0$

4) $3x^2 + 5x + 2 = 0$

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