Lesson : MATHEMATICS OF CHANCE

ACTIVITY 1 :

A box contains four paper slips numbered 1,2,3,4 and another box contains two paper slips numbered 1,2. If one slip is taken from each ,
   a) **Write all the pairs of numbers.**
   b) **How many pairs are there?**
   c) **Write the pairs in which both the numbers are odd.**
   d) **How many pairs are there in which both the numbers are odd?**
   e) **Write the probability of getting both numbers are odd**
   f) **Write the pairs in which both the numbers are even**
   g) **How many pairs are there in which both the numbers are even?**
   h) **Write the probability of getting both numbers are even**

ACTIVITY 2:

One is asked to say a three digit number. What is the probability that :
   a) **All the digits of the numbers are same.**
   b) **The number is a multiple of 6.**

ACTIVITY 3:

Two slips of paper marked 5 and 10 are put in a box and three slips marked 1,3,5 are put in another.One slip from each box is taken :
   a) **What is the probability that both show odd numbers?**
   b) **What is the probability of getting one odd number and one even number?**

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Class :X	Subject : Maths	Date :6/10/20	Worksheet No :29

LESSON:Mathematics of chances

Activity :1

In a class, out of 50 students 30 are boys.25 out of 40 students in another class are also boys. One student is selected from each class
   a) What is the total number of pairs?
   b) What is the probability for both students to be boys?
   c) What is the probability for both students to be girls?
   d) What is the probability for the students to be a girl and a boy?
   e) What is the probability that atleast one student selected is a girl?

Activity :2

Tokens numbered from 1to 4 are placed in two boxes. What is the probability that the sum of these two numbers will be a
   a) prime number?
   b) a multiple of 3?

Activity :3

If two dice (with numbers 1 to 6 marked on them) are rolled simultaneously then what is the probability that
   a) Sum of the numbers on the dice will be a multiple of 5?
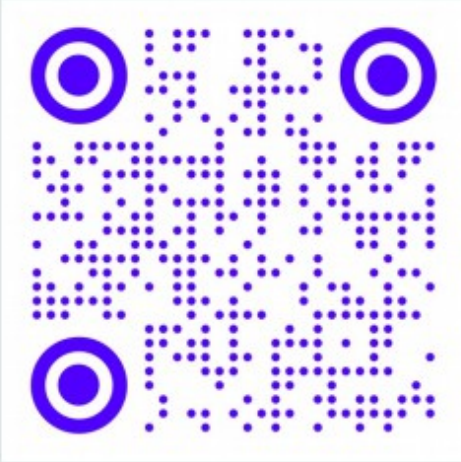   b) numbers on both the dice will be the same?

c) the sum of the numbers on the dice will not be 12?

d) atleast one of the numbers will be an even number?

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Class: X	Subject: MATHEMATICS	Date: 08/10/2020	Worksheet No: 30

LESSON: SECOND DEGREE EQUATIONS

LO: Framing and Solving Second Degree Equations.

ACTIVITY .1

When each side of a square is increased by 2 metre , perimeter becomes 100 metre . What is the length of a side of the original square ?

ACTIVITY .2

When each side of a square is reduced by 3 metres, area becomes 256 m$^{2.}$ Frame an equation using above data by taking the side of the larger square as x metre. Find the length of the sides of both squares ?

One side of the larger square = x

One side of the smaller square = ...

Area of the smaller square = ... = 256

=........................

x=........................

Side of the larger square = ...

Side of the smaller square = ...

ACTIVITY 3.

A pavement of width 1 metre is built around a square shaped garden. The area of the garden including the path is 961 m^2 .Find the side of the garden ?

Side of the garden = x

Side of the garden including

pavement =.....................
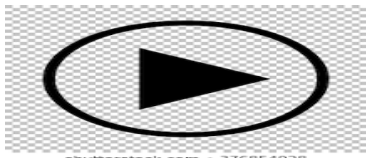
Total area =$(x+.....)^2$

= ....=....................

Side of the garden x =...........

ACTIVITY 4.

A box is to be made by cutting off small squares from each corner of a square of thick paper, and bending upwards. The height of the box is to be 10cm and volume 1 litre.What shoud be the length of a side of the square sheet we start with ?

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| Class: 10 | Subject:Maths | Date: 9-10-20 | WorksheetNo: 31 |

ACTIVITY 1

5,7,9.... is an arithmetic sequence. The square of a term of this arithmetic sequence is 2025. What is its position ?

$\qquad$ First term = ...   Common difference = ...

$\qquad$ n^{th} term = an + b,   a = ... , b = ...

Square of nth term = 2025

(..........)² $\qquad$ = 2025

$\qquad$ .... $\qquad$ = $\sqrt{2025}$

$\qquad$ .... $\qquad$ = 45

$\qquad$ 2n $\qquad$ = ...

$\qquad$ n $\qquad$ = ...

Square of .... term is 2025

ACTIVITY 2

A man deposits 4000 rupees in a bank which gives interest compounded annually. After 2 years he got 4410 rupees totally. Find the rate of interest (Amount after n years = p(1+$\frac{r}{100}$)^n)

Amount deposited $\qquad$ = 4000

No of years $\qquad$ = 2

The amount he received after 2 years = 4410

$\qquad$ 4000(....+....)² = 4410

$\qquad$ (....+....)² = $\frac{4410}{4000}$

$\qquad$ .... = $\sqrt{\frac{441}{400}}$

$\qquad$ $\frac{r}{100}$ $\qquad$ = ...

$\qquad$ r $\qquad$ = ... Rate of interest = ...

ACTIVITY 3

x

x   x

x

x

2 m
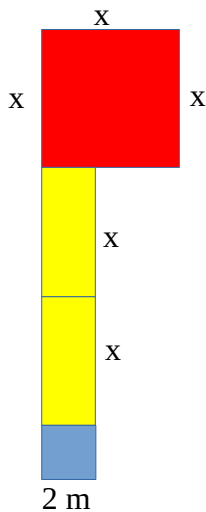
The shape of a sign board is given. It is made up of a large square , 2 equal rectangles with width 2m and height equal to side of the large square and a small square of one side 2 m. The area of the whole figure is 144 m².Find the length of one side of the red square.(Take one side of the red square as x metre)

Area of the red square   = ...
Area of the 2 yellow rectangles   = ...
Area of the blue square   = ...
Area of the sign board   = ...+ ..... + ...
$(x + ...)^2$ = 144
$(x + ...)$ = ...
x   = ...
One side of the red square   = ...

ACTIVITY 4

x   3

x   x

3

x
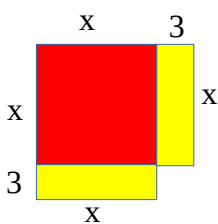
In the figure a red square with side x cm and two yellow rectangles with length x cm and width 3 cm are joined.
(i) To complete this figure to a square which geometrical shape is to be added ?
(ii) What is the area of the new shape that we are adding ?
 (iii) What is the length of one side of the completed square (large square) ?
 (iv) If area of the given figure is 720 sq. cm ,find one side of the red square

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| CLASS :10 | Subject : Mathematics | Date : 12-10-20 | Worksheet No : 32 |

Lesson : Second Degree Equations.

Activity 1

The product of two consecutive odd numbers is 35. If first odd number is x, then

(a) next odd number = ...

(b) x x .... = 35

(c) $x^2 + ... = 35$

(d) $x^2 + ... + ... = ...$

(e) $(.... + ...)^2 = ...$

(f) x + ... = ...

(g) x = ...

(h) Thus the numbers = ... , ...

Activity 2

Length of a rectangle is 4cm longer than its breadth. Area of the rectangle is 140cm^2. Find the length and breadth.

Activity 3

The difference of two positive numbers is 8, their product is 560. Find the numbers?

Activity 4

7, 11, 15, ... is an arithmetic sequence. The product of its two consecutive terms is 621. Find the terms.

Activity 5

Six times of a natural number when subtracted from its square gives 160. Find the numbers.

CLASS LINK	SCAN THE CODE