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## Maninagar Campus

Grade : IX	Subject : Mathematics	Date : 10/10/2019
Name :	Practice Worksheet PT-3	Chapter No. 1,2,3,4,5,6,7,12,15

- Probability of a certain event is .....
- A bag contains 50 coins and each coin marked from 51 to 100. One coin is picked up at random. The probability that the number on the coin is not a prime number is.....
- A die is thrown once. The probability of getting an even no. is  
(a)  $\frac{1}{2}$                       (b)  $\frac{1}{3}$                       (c)  $\frac{1}{5}$                       (d) 2
- $x = 3, y = -2$  is a solution of the equation.  
(a)  $x + y = 5$                       (b)  $3x - 2y = 11$   
(c)  $4x - 3y = 18$                       (d)  $3x + y = 5$
- The cost of a pen is four times the cost of a pencil express the statement as a linear equation in two variables.
- Write three solutions for the equation  $7x - 8y = 13$
- A bag contains 50 coins and each coin marked from 51 to 100. One coin is picked up at random. The probability that the number on the coin is not a prime number is.....

- The percentage of attendance of different classes in a year in a school is given below:

Class	X	IX	VIII	VII	VI	V
Attendance	30	62	85	92	76	55

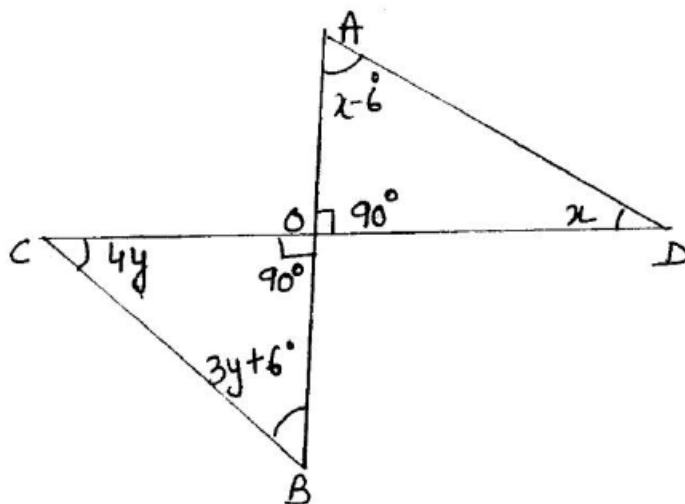
What is the probability that the class attendance is more than 75%

- The cost of 2 pencils is same as the cost of 5 erasers. Express the statement as a linear equation in two variables.
- Verify that  $x = 2, y = -1$ , is a solution of the linear equation  $7x + 3y = 11$

11. Rationalize the denominator of  $\frac{6}{3+\sqrt{2}}$
12. Find the cost of leveling a ground in the form of a triangle with sides 16m, 12m and 20m at Rs. 4 per sq. meter.
13. The record of a weather station shows that out of the past 250 consecutive days, its weather forecast correct 175 times. What is the probability that on a given day.
- (i) it was correct.
- (ii) it was not correct.
14. In a cricket match, a batsman hits a boundary 6 times out of 30 balls plays. Find the probability that on a ball played.
- (i) He hits boundary           (ii) He does not hit a boundary.
15. A die is thrown 1000 times with following frequency of out comes 1, 2, 3, 4, 5 and 6 as given below

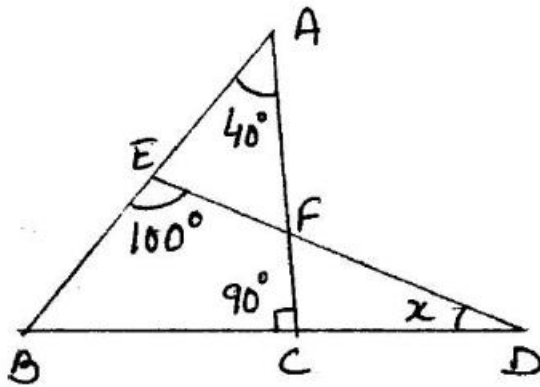
No. on die	1	2	3	4	5	6
Frequency	179	150	157	149	175	190

16. Find  $x$  and  $y$  in the following figure.

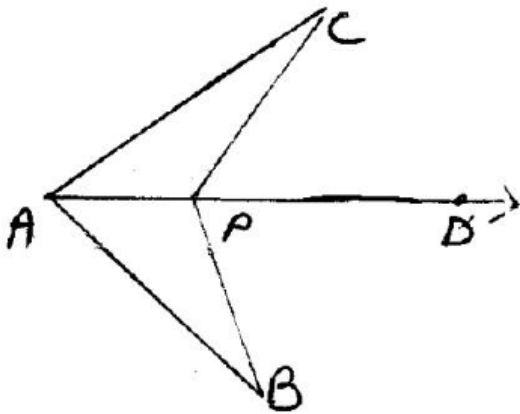


17. A transversal intersects two parallel lines. Prove that the bisectors of any pair of corresponding angle so formed are parallel.

18. In figure find  $x$ .



19. Prove that angles opposite to two equal sides of a triangle are equal.
20. In the given figure  $\angle CPD = \angle BPD$  and AD is the bisector of  $\angle BAC$ . Prove that  $\triangle BAP \cong \triangle CAP$  and hence  $BP = CP$



21. The sides of a triangular field are 41m, 40m and 9m. Find the number of flower beds that can be prepared in the field, if each flower bed needs  $900\text{cm}^2$  space.
22. Using factor theorem, show that  $x + 5$  is a factor of  $(2x^3 + 9x^2 - 11x - 30)$
23.  $\triangle ABC$  is an isosceles triangle with  $AB = AC$  side BA is produced to D such that  $AB = AD$  Prove that  $\angle BCD$  is a right angle.
24. Plot the point  $(1,2)$ ,  $(3,-4)$ ,  $(-4,-7)$  and  $(-2,2)$  on the graph paper.
25. Draw the graph of each of the equations  $2x - 3y + 5 = 0$  and  $5x + 4y + 1 = 0$  and find the coordinates of the point where the lines meet.
26. Draw a quadrilateral with vertices  $A(2,2)$   $B(2,-2)$   $C(-2,-2)$ ,  $D(-2,2)$ . Classify the quadrilateral and also find its area.

27. The percentage of marks obtained by a student in the monthly unit tests are given as :

Unit Test	I	II	III	IV	V
% marks obtained	58	64	76	62	85

Find the probability that the student get a distinction (marks more than 75%)

28. Find the value of  $a$  for which  $(x - a)$  is a factor of the polynomial.

$$f(x) = x^5 - a^2x^3 + 2x + a - 3$$

29. Factorize the following expressions.

(i)  $5x^2 - 20xy$

(ii)  $5a(b + c) - 7b(b + c)$

(iii)  $x(x - y)^2 + 3x^2y(x - y)$

30. Calculate the area of the shaded region.

