



# MATHS

**BOOKS - CALCUTTA BOOK HOUSE**

**MATHS (BENGALI ENGLISH)**

**CONSTRUCTION - DRAWING OF  
TRIANGLES EQUAL TO THE AREA OF A  
GIVEN QUADRILATERAL**

**Examples**

1. Write the first five terms of the following sequence whose  $n$ th term are:  $a_n = \frac{2n - 3}{6}$



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2. Find the next five terms of each of the following sequences given by :

$$a_1 = 1, a_n = a_{n-1} + 2, n \geq 2$$



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3. Find the next five terms of each of the following sequences given by :

$$a_1 = 4, a_n = 4a_{n-1} + 3, n > 1$$



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4. A bag contains 3 red balls, 5 black balls and 4 white balls. A ball is drawn at random from the bag. What is the probability that the ball drawn is red?



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5. Two unbiased dice are thrown. Find the probability that the total of the numbers on the dice is greater than 10.



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6. In a lottery of 50 tickets numbered 1 to 50, one ticket is drawn. Find the probability that the drawn ticket bears a prime number.



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## Exercise 6

1. An urn contains 10 red and 8 white balls. One ball is drawn at random. Find the probability that the ball drawn is white.



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2. Tickets numbered from 1 to 20 are mixed up and a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 7?



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3. In a lottery there are 10 prizes and 25 blanks.

What is the probability of getting a prize ?



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4. What is the probability that a number selected from the numbers 1, 2, 3..... 15 is a multiple of 4 ?



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5. A bag contains 6 red, 8 black and 4 white balls. A ball is drawn at random. What is the probability that ball drawn is not black?



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6. Two customers are visiting a particular shop in the same week (Monday to Saturday). Each is equally likely to visit the shop on any one day as on another. What is the probability that both will visit the shop on the same day?



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7. In a bag there are 44 identical cards with figure of circle or square on them. There are 24 circles, of which 9 are blue and rest are green and 20 squares of which 11 are blue and rest are green. One card is drawn from the bag at random. Find the probability that it has the figure of square.



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8. If the probability of winning a game is 0.3, what is the probability of loosing it ?



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9. Find the coordinates of the point which divides the join of  $(-1, 7)$  and  $(4, -3)$  in the ratio  $2 : 3$ .



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**10.** Two customers are visiting a particular shop in the same week (Monday to Saturday). Each is equally likely to visit the shop on any one day as on another. What is the probability that both will visit the shop on consecutive days?



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**11.** If  $(1, 2)$ ,  $(4, y)$ ,  $(x, 6)$  and  $(3, 5)$  are the vertices of a parallelogram taken in order, find  $x$  and  $y$ .





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**12.** Find the ratio in which the line segment joining the points  $(-3, 10)$  and  $(6, -8)$  is divided by  $(-1, 6)$ .



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