

# LATEX ASSIGNMENT

ANAND

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## EXERCISE 10.3.7

1. The ages of two friends ani and Biju differ by 3 years. Ani's father dharam is twice as old as Ani and Biju is twice as old as sister cathy. The ages of cathy and dharam differ by 30 years. Find the ages of Ani and Biju.
2. One says, "Give me a hundred, Friend ! I shall then become twice as rich as you ". The other "if you give me ten, i shall be six times as rich as you ". Tell me What is the amount of their (respective) capital? [From the bijaganita of bhaskara II]  
[Hint :  $X + 100 = 2(y - 100)$ ,  $y + 10 = 6(x - 10)$ ]
3. A train Covered a certain distance at a uniform speed. If the train would have been 10 km/h faster, it would have taken 2 hours less than the scheduled time. And, if the train were slower by 10 km/h; it would have taken 3 hours more than the scheduled time. Find the distance covered by the train.
4. The students of a class are made to stand in rows. If 3 Students are extra in a row, there would be 1 row less. If 3 students are less in a row, there would be 2 rows more. Find the number of stuents in the class.
5. In a  $\triangle ABC$ ,  $\angle C = 3\angle B = 2(\angle A + \angle B)$ . Find the three angles
6. Draw the graphs of the equations  $5x - y = 5$  and  $3x - y = 3$ . Determine the Co-ordinates of the vertices of the triangle formed by these lines and the y axis.
7. Solve the following pair of linear equations;

(a)

$$px + qy = p - q \quad (1)$$

$$qx - py = p + q \quad (2)$$

(b)

$$ax + by = c \quad (3)$$

$$bx + ay = 1 + c \quad (4)$$

(c)

$$\frac{x}{a} - \frac{y}{b} = 0 \quad (5)$$

$$ax + by = a^2 + b^2 \quad (6)$$

(d)

$$(a - b)x + (a + b)y = a^2 - 2ab - b^2 \quad (7)$$

$$(a + b)(x + y) = a^2 + b^2 \quad (8)$$

(e)

$$152x - 378y = -74 \quad (9)$$

$$-378x + 152y = -604 \quad (10)$$

8.  $ABCD$  is a cyclic quadrilateral [see Fig. 1]. Find the angles of the cyclic quadrilateral.

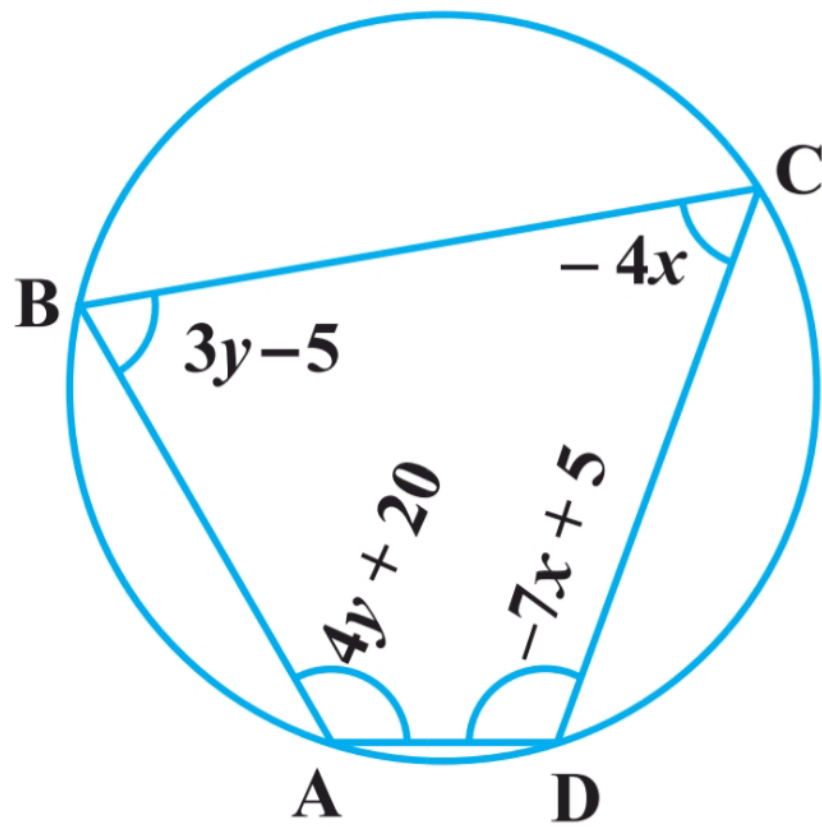


Figure 1: 3.7