

BCM SCHOOL, BASANT AVENUE, DUGRI ROAD, LUDHIANA
CLASS -X (MATHEMATICS)
Assignment 2 (ANSWER KEY)

1.	A : 3median		
2.	B: 3/4		
3.	A: No solution		
4.	B		
5.	F1 = 8 and F2 = 12		
6.	Put the value of x and y in $x^2 + y^2$ Solve the algebraic identities Then apply trigonometry identity		
7.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <p>Let x and y be the present age of son and father respectively.</p> <p>Now according to the question-</p> <p>Condition I:- Four years ago father's age was 6 times that of his son.</p> <p>4 years ago son's age= $x - 4$</p> <p>4 years ago the father's age= $y - 4$</p> <p>$\Rightarrow y - 4 = 6(x - 4)$</p> <p>$\Rightarrow y - 4 = 6x - 24$</p> <p>$\Rightarrow 6x - y = 24 - 4 = 20$(i)</p> <p>Condition II:- Ten years later, the father will be two and a half times as old as his son.</p> <p>Ten years later, son's age= $x + 10$</p> <p>Ten years later, father's age= $y + 10$</p> <p>$\Rightarrow y + 10 = 2\frac{1}{2}(x + 10)$</p> <p>$\Rightarrow y + 10 = \frac{5}{2}(x + 10)$</p> <p>$\Rightarrow 2(y + 10) = 5(x + 10)$</p> <p>$\Rightarrow 2y + 20 = 5x + 50$</p> <p>$\Rightarrow 5x - 2y = 20 - 50$</p> <p>$\Rightarrow 5x - 2y = -30$(ii)</p> </td> <td style="width: 50%; padding: 5px;"> <p>Multiply eq. (i) by 2, we get</p> <p>$12x - 2y = 40$(iii)</p> <p>Subtract eq. (ii) from (iii), we get</p> <p>$12x - 2y - (5x - 2y) = 40 - (-30)$</p> <p>$\Rightarrow 12x - 2y - 5x + 2y = 40 + 30$</p> <p>$\Rightarrow 7x = 70$</p> <p>$\Rightarrow x = 10$ years</p> <p>$y = 40$ years</p> <p>Hence, the present age of father and son is 10 years and 40 years respectively.</p> </td> </tr> </table>	<p>Let x and y be the present age of son and father respectively.</p> <p>Now according to the question-</p> <p>Condition I:- Four years ago father's age was 6 times that of his son.</p> <p>4 years ago son's age= $x - 4$</p> <p>4 years ago the father's age= $y - 4$</p> <p>$\Rightarrow y - 4 = 6(x - 4)$</p> <p>$\Rightarrow y - 4 = 6x - 24$</p> <p>$\Rightarrow 6x - y = 24 - 4 = 20$(i)</p> <p>Condition II:- Ten years later, the father will be two and a half times as old as his son.</p> <p>Ten years later, son's age= $x + 10$</p> <p>Ten years later, father's age= $y + 10$</p> <p>$\Rightarrow y + 10 = 2\frac{1}{2}(x + 10)$</p> <p>$\Rightarrow y + 10 = \frac{5}{2}(x + 10)$</p> <p>$\Rightarrow 2(y + 10) = 5(x + 10)$</p> <p>$\Rightarrow 2y + 20 = 5x + 50$</p> <p>$\Rightarrow 5x - 2y = 20 - 50$</p> <p>$\Rightarrow 5x - 2y = -30$(ii)</p>	<p>Multiply eq. (i) by 2, we get</p> <p>$12x - 2y = 40$(iii)</p> <p>Subtract eq. (ii) from (iii), we get</p> <p>$12x - 2y - (5x - 2y) = 40 - (-30)$</p> <p>$\Rightarrow 12x - 2y - 5x + 2y = 40 + 30$</p> <p>$\Rightarrow 7x = 70$</p> <p>$\Rightarrow x = 10$ years</p> <p>$y = 40$ years</p> <p>Hence, the present age of father and son is 10 years and 40 years respectively.</p>
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8.	<p>CASE STUDY:</p> <p>A. $X + y = 30$-----(1) $Y = x + 10$-----(2)</p> <p>B. On solving $x = 10, y = 20$ Points scored by raiders $2(20) = 40$</p> <p>C. Points scored by defenders $1(10) = 10$</p> <p>D. Total scores 50</p>		