

Let the point = (0,y)
then, (0,y)

$$= \left(\frac{5 \times 1 + m_2(-3)}{m+1}, \frac{1 \times 3 + m \times 1}{m+1} \right)$$

$$\Rightarrow \frac{5-3m}{m+1} = 0 \Rightarrow m = \frac{5}{3}$$

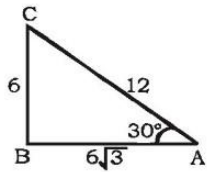
So, required ratio = 5 : 3

68. (2) ATQ,

$$\text{area of } \Delta XYZ = \frac{(6)^2}{(1)^2} \times 15$$

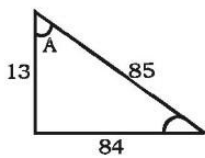
$$= 540 \text{ cm}^2$$

70. (3) ATQ,



$$\text{Hence, } AB = 6\sqrt{3} \text{ cm}$$

71. (1) ATQ,



$$\cot A = \frac{13}{84} \Rightarrow \sec A = \frac{85}{13}$$

72. (1) 3

73. (4) Required number

$$= 100 + 150 + 150 + 250 + 350$$

$$= 1000$$

74. (4) Required increment

$$= \frac{(250-150)}{150} \times 100 = 66\frac{2}{3} \%$$

75. (1) Total fees

$$= (100 + 150 + 150) \times 10000 + (250 + 35 + 300) \times 12000$$

$$= ₹14800000$$

82. (2) Certain verbs (own, have, belong, comprise) do not take 'ing' form. Hence they cannot come in continuous tense. Thus replace 'has been belonging with 'has belonged'.

83. (3) Formula for conditional sentence: If + sub + had + V3, Sub + would have + V3

86. (1) Here 'being' is a Gerund and possessive adjective comes before a Gerund.

87. (2) Compound nouns are made plural by adding 's' to the main word. Replace 'sister-in-laws'

with 'sisters-in-law'.

92. (2) 'complaints' are registered & not expressed, informed or noted.