



8. $O \in d \Rightarrow d: y - y_0 = m(x - x_0) \Leftrightarrow d: y = mx \dots\dots\dots 2p$
 $d \parallel AB \Rightarrow m = m_{AB} \dots\dots\dots 2p$
 $m_{AB} = \frac{3}{2} \dots\dots\dots 4p$
 $d: y = \frac{3}{2}x \Leftrightarrow d: 3x - 2y = 0 \dots\dots\dots 2p$

9. Conform teoremei sinusurilor avem :

$$\frac{BC}{\sin A} = \frac{AC}{\sin B} = \frac{AB}{\sin C} \dots\dots\dots 1p$$

$$A + B + C = \pi \Rightarrow C = \pi - A - B \dots\dots\dots 1p$$

$$\sin C = \sin \left(\pi - \left(\frac{\pi}{4} + \frac{\pi}{3} \right) \right) = \sin \left(\frac{\pi}{4} + \frac{\pi}{3} \right) \dots\dots\dots 1p$$

$$\sin C = \frac{\sqrt{2}(1+\sqrt{3})}{4} \dots\dots\dots 2p$$

Aplicând teorema sinusurilor obținem:

$$AC = 4\sqrt{6}. \dots\dots\dots 2p$$

$$AB = 4(1 + \sqrt{3}) \dots\dots\dots 2p$$

$$P_{ABC} = 4(3 + \sqrt{3} + \sqrt{6}) \dots\dots\dots 1p$$