

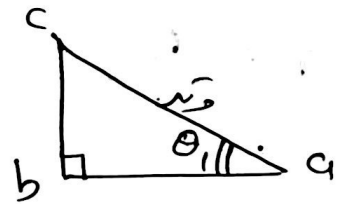
مسألة 10 من 106 %
 مجال منتظم
 معطيات:
 $\Delta V = V_b - V_a = -E d \cos \theta$
 $V_c - V_b = -600 \text{ V}$

① $\Delta V = V_c - V_b = -E d \cos \theta$
 $-600 = -E (3 \times 10^{-2}) \cos 50^\circ$
 $\frac{-600}{-3 \times 10^{-2}} = \frac{-3 \times 10^{-2}}{-3 \times 10^{-2}} E$
 $E = 2 \times 10^{2+2} = 2 \times 10^4 \text{ N/C} = \text{V/m}$

② $V_c - V_a = -E d \cos \theta$
 $= -(2 \times 10^4) \times 5 \times 10^{-2} \times \cos \theta$
 مثنائين
 الضلع² + الضلع² = الوتر²
 بقانون الزاوية القائمة



$\tan \theta_1 = \frac{cb}{ba} = \frac{3}{4} = 0.75$
 $\theta_1 = 37^\circ$
 $\theta = 90 - 37 = 53^\circ$



$(ca)^2 = (cb)^2 + (ba)^2$
 $(ca)^2 = (3)^2 + (4)^2$
 $\sqrt{ca^2} = \sqrt{9 + 16}$
 $ca = \sqrt{25} = 5 \text{ cm}$

$V_c - V_a = -(2 \times 10^4) (5 \times 10^{-2}) \cos 53$
 $= -(10) (10^2) (0.6)$
 $= -1000 \times 0.6$
 $= -600 \text{ V}$