

$$12x = 18$$

$$x = \frac{18}{12} = \frac{3}{2}$$

$$O \left( \frac{3}{2}, \frac{5}{4} \right)$$

$$2 \cdot \frac{3}{2} - 4y + 2 = 0$$

$$3 - 4y + 2 = 0$$

$$5 - 4y = 0$$

$$4y = 5$$

$$y = \frac{5}{4}$$

$$e) \begin{array}{l} 2x + 4y - 5 = 0 \\ x - 2y + 5 = 0 \quad /:2 \\ \hline 2x + 4y - 5 = 0 \\ 2x - 4y + 10 = 0 \\ \hline 4x + 5 = 0 \\ 4x = -5 \\ x = -\frac{5}{4} \end{array}$$

$$2 \cdot \left(-\frac{5}{4}\right) + 4y - 5 = 0$$

$$-\frac{5}{2} + 4y - 5 = 0$$

$$4y = \frac{5}{2} + \frac{10}{2}$$

$$4y = \frac{15}{2}$$

$$y = \frac{15}{2} \cdot \frac{1}{4} = \frac{15}{8}$$

$$S \left( -\frac{5}{4}, \frac{15}{8} \right)$$

$$d) \cos \widehat{BAC} = \frac{\vec{AB} \cdot \vec{AC}}{|\vec{AB}| \cdot |\vec{AC}|} = \frac{(-5) \cdot (-2) + (-2) \cdot 4}{\sqrt{29} \cdot \sqrt{20}} = \frac{10 - 8}{2\sqrt{145}}$$

$$= \frac{2}{2\sqrt{145}} = \frac{1}{\sqrt{145}}$$

$$\vec{AB} = B - A = (-5, -2) \quad AB = \sqrt{25 + 4} = \sqrt{29}$$

$$\vec{AC} = C - A = (-2, 4) \quad AC = \sqrt{4 + 16} = \sqrt{20}$$

$$\widehat{BAC} = 85,2^\circ$$

$$\cos \widehat{ABC} = \frac{\vec{BA} \cdot \vec{BC}}{|\vec{BA}| \cdot |\vec{BC}|} = \frac{5 \cdot 3 + 2 \cdot 6}{\sqrt{29} \cdot \sqrt{45}} = \frac{15 + 12}{3\sqrt{145}} = \frac{27}{3\sqrt{145}}$$

$$= \frac{9}{\sqrt{145}}$$

$$\vec{BA} = A - B = (5, 2) \quad BA = \sqrt{25 + 4} = \sqrt{29}$$

$$\vec{BC} = C - B = (3, 6) \quad BC = \sqrt{9 + 36} = \sqrt{45}$$

$$\widehat{ABC} = 41,6^\circ$$

$$\cos \widehat{ACB} = \frac{\vec{CA} \cdot \vec{CB}}{|\vec{CA}| \cdot |\vec{CB}|} = \frac{2 \cdot (-3) + (-4) \cdot (-6)}{\sqrt{20} \cdot \sqrt{45}} = \frac{-6 + 24}{30} = \frac{18}{30}$$

$$= \frac{3}{5}$$

$$\vec{CA} = A - C = (2, -4) \quad CA = \sqrt{20}$$

$$\vec{CB} = B - C = (-3, -6) \quad CB = \sqrt{45}$$

$$\widehat{ACB} = 53,1^\circ$$