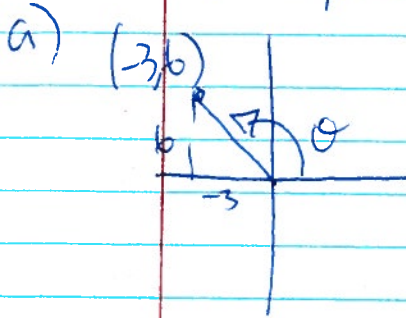


1. point  $(-3, 6)$



b)

$$x^2 + y^2 = r^2$$

$$(-3)^2 + (6)^2 = r^2$$

$$9 + 36 = r^2$$

$$\sqrt{45} = r$$

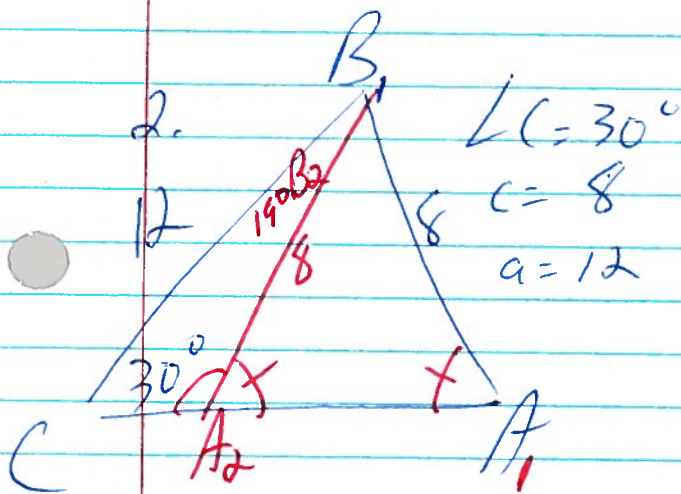
$$\sqrt{9 \cdot 5} = r$$

c)

$$\sin \theta = \frac{6 \cdot \sqrt{5}}{3\sqrt{5} \cdot \sqrt{5}}$$

$$= \frac{6\sqrt{5}}{15}$$

$$= \frac{2\sqrt{5}}{5}$$



$$\cos \theta = \frac{-3 \cdot \sqrt{5}}{3\sqrt{5} \cdot \sqrt{5}}$$

$$= \frac{-3\sqrt{5}}{15}$$

$$= \frac{-\sqrt{5}}{5}$$

$$\tan \theta = \frac{6}{-3} = -2$$

$$12 \sin 30^\circ < 8 < 12$$

$$6 < 8 < 12 \text{ also } \Delta$$

$\Delta 1$

$$\frac{8}{\sin 30^\circ} = \frac{12}{\sin A}$$

$$\angle A_1 = 49^\circ$$

$$\angle B_2 = 180^\circ - 30^\circ - 49^\circ = 101^\circ$$

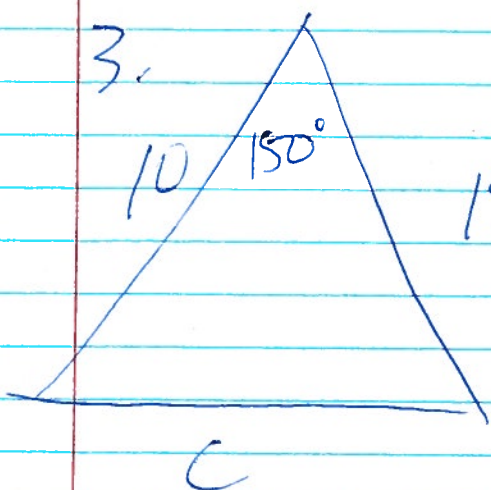
$$\frac{8}{\sin 30^\circ} = \frac{b}{\sin 101^\circ} \quad \boxed{b = 15,7}$$

$\Delta 2 \angle A_2 = 180^\circ - 49^\circ =$

$$\angle A_2 = 131^\circ$$

$$\angle B_2 = 180^\circ - 30^\circ - 131^\circ = 19^\circ$$

$$\frac{8}{\sin 30^\circ} = \frac{b}{\sin 19^\circ} \quad \boxed{b = 5,2}$$



$$c^2 = 10^2 + 15^2 - 2(10)(15)\cos 150^\circ$$

$$\sqrt{c^2} = \sqrt{325 - 300\cos 150^\circ}$$

$$c = 24$$

4. Résolve

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$2x^2 - 5x - 4 = 0$$

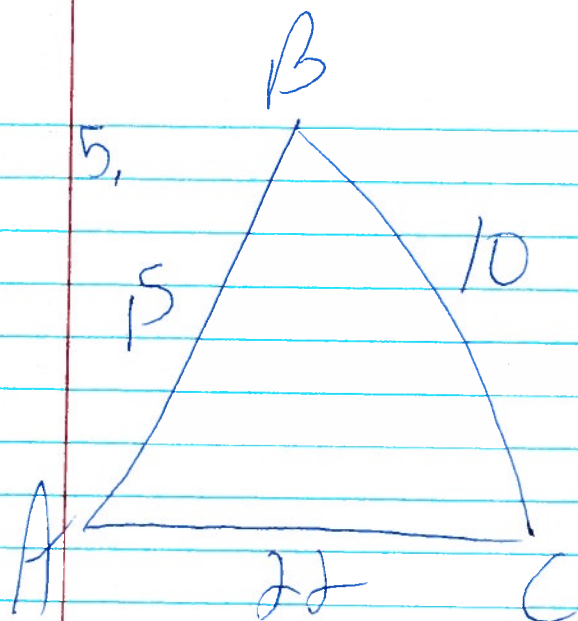
$$x = \frac{-(-5) \pm \sqrt{(-5)^2 - 4(2)(-4)}}{2(2)}$$

$$x = \frac{5 \pm \sqrt{25 + 32}}{4}$$

$$x = \frac{5 + \sqrt{57}}{4} \leftarrow \text{réponse exacte} \rightarrow x = \frac{5 - \sqrt{57}}{4}$$

$$x \approx 3,137 \leftarrow \text{réponse arrondie} \rightarrow x \approx 0,637$$





$$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$$

$$\cos A = \frac{22^2 + 15^2 - 10^2}{2 \cdot 22 \cdot 15}$$

$$\cos A = \frac{609}{660}$$

$$\cos^{-1}\left(\frac{609}{660}\right) = \angle A$$

$$\angle A = 23^\circ$$