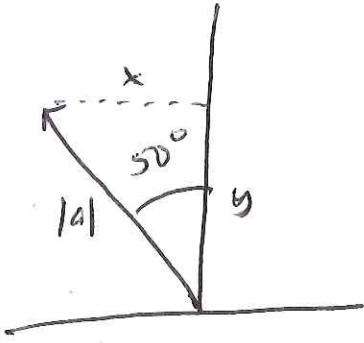


Appendix J1

#5 Using the angle provided.



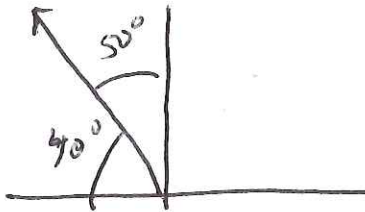
$$\cos 50^\circ = \frac{y}{|a|} \Rightarrow y = |a| \cos 50^\circ \\ = 10 \cos 50^\circ$$

$$\sin 50^\circ = \frac{x}{|a|} \Rightarrow x = |a| \sin 50^\circ \\ x = 10 \sin 50^\circ$$

Note The vector is pointing to the upper left so the x component should be negative. (y is positive)

$$a = \langle -10 \sin 50^\circ, 10 \cos 50^\circ \rangle$$

using the adjusted angle.



$$a = \langle -10 \cos 40^\circ, 10 \sin 40^\circ \rangle$$