

53. (a) With $a = 17.0$ m and $\theta = 56.0^\circ$ we find $a_x = a \cos \theta = 9.51$ m.
- (b) And $a_y = a \sin \theta = 14.1$ m.
- (c) The angle relative to the new coordinate system is $\theta' = 56 - 18 = 38^\circ$. Thus, $a'_x = a \cos \theta' = 13.4$ m.
- (d) And $a'_y = a \sin \theta' = 10.5$ m.