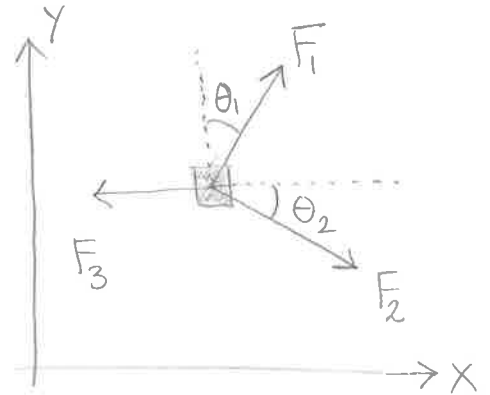


Quiz

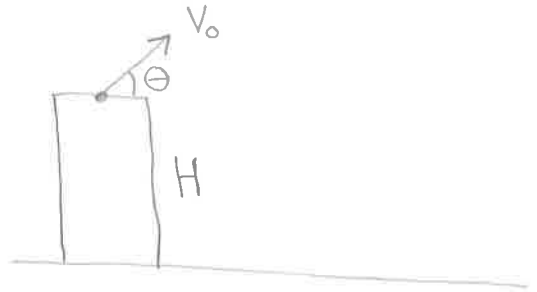
The object shown below is being acted upon by 3 forces with known magnitudes and angles shown. What is the total force acting on the object?

- | F_x^{tot} | F_y^{tot} |
|--|---|
| a) $F_1 \sin \theta_1 + F_2 \cos \theta_2 - F_3$ | $F_1 \cos \theta_1 - F_2 \sin \theta_2$ |
| b) $F_1 \sin \theta_1 - F_2 \cos \theta_2 - F_3$ | $F_1 \cos \theta_1 - F_2 \sin \theta_2$ |
| c) $F_1 \cos \theta_1 + F_2 \cos \theta_2 - F_3$ | $F_1 \sin \theta_1 - F_2 \sin \theta_2$ |
| d) $F_1 \cos \theta_1 - F_2 \cos \theta_2 - F_3$ | $F_1 \sin \theta_1 - F_2 \sin \theta_2$ |
| e) None of the above | |



Quiz

An object is launched with speed v_0 at an angle θ with respect to the horizontal from a building of height H . If after launch the object experiences only a gravitational force, which equation could be solved to find the time at which the object hits the ground?



(a) $0 = v_0 \sin \theta t - \frac{1}{2} g t^2$

(b) $0 = H + v_0 \sin \theta t - \frac{1}{2} g t^2$

(c) $H = v_0 \sin \theta t - \frac{1}{2} g t^2$

(d) $0 = v_0^2 \sin^2 \theta - 2gH$

(e) $0 = v_0^2 \sin^2 \theta + 2gH$