Answer on question #59394, Physics / Mechanics — Relativity —

Question A projectile is fired with velocity 20ms$^-$1 at angle 60 to the horizontal . Determine the components of the velocity at maximum height

Solution At maximum height there is no vertical component of velocity, as all energy that was in it transformed to potential energy.

$$v_y = 0$$

Horizontal component does not change during flight

$$v_x = v \cdot \cos 60° = 20 \cdot \frac{1}{2} = 10 \, m/s$$