V – speed, t – time, 60 deg with horizont('cause 90-30=60 deg)

$$H_{max} = \frac{V^2 sin60°^2}{2g}$$

$$H_{max} = \frac{100 \cdot 0.86 \cdot 0.86}{20} = 3.69\ meters$$

$$t = \frac{2Vcos60°}{g}$$

$$t = \frac{20 \cdot 0.5}{10} = 1\ sec$$