



$$\vec{w}: W = \vec{w} \cdot \Delta \vec{r} = mg \Delta r \cos(0^\circ) = \underline{12500 \text{ J}}$$

$$\vec{T}_1: W = \vec{T}_1 \cdot \Delta \vec{r} = T_1 \Delta r \cos(150^\circ) = \underline{-7924 \text{ J}}$$

$$\vec{T}_2: W = \vec{T}_2 \cdot \Delta \vec{r} = T_2 \Delta r \cos(135^\circ) = \underline{-4578 \text{ J}}$$

Do you notice something about these numbers?

$$W_w + W_{T_1} + W_{T_2} = W_{\text{net}} = 0$$

Why?

The speed is constant, so no net energy is transferred to the piano.