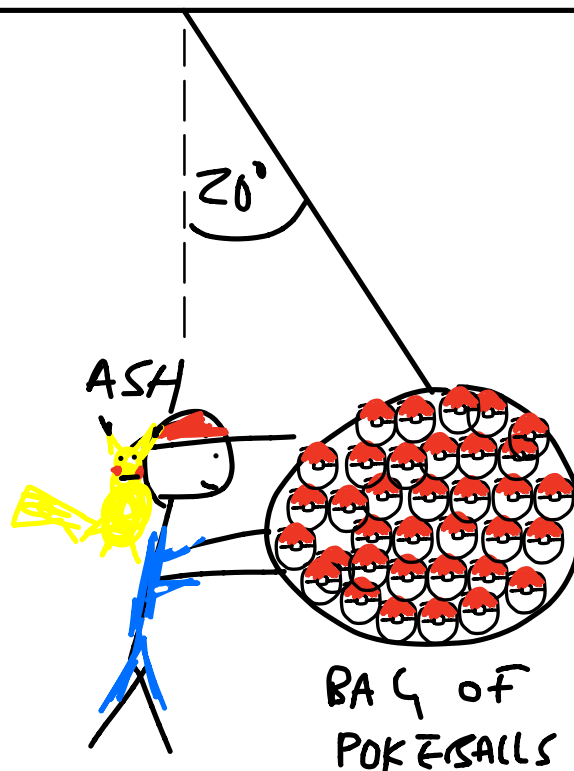


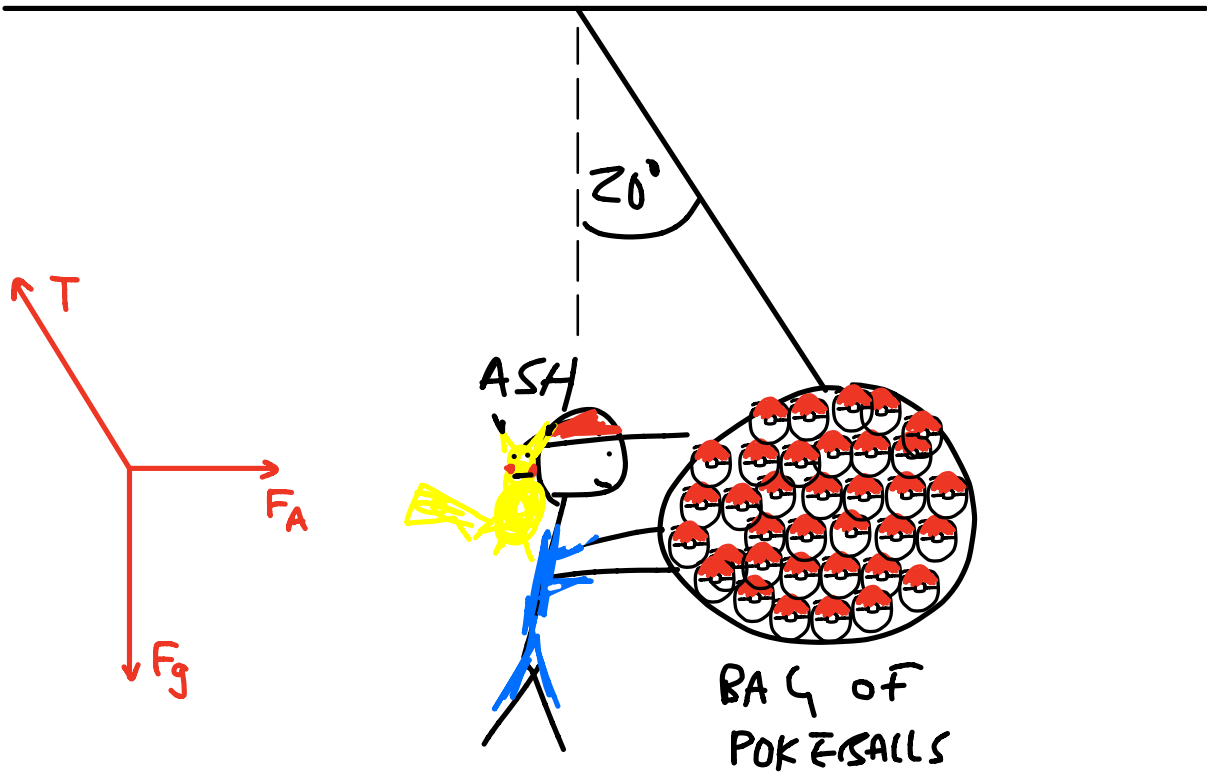
A 20 kg bag of Pokéballs hangs from the ceiling. When Ash pushes the bag to the right, the rope makes an angle of  $20^\circ$  to the vertical as shown.

- a) What is the applied force?
- b) What is the tension in the rope?



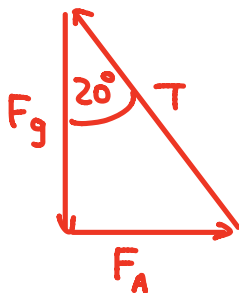
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$$\vec{F}_{\text{NET}} = 0$$

$$\vec{F}_g + \vec{F}_A + \vec{T} = 0$$



$$T = \frac{F_g}{\cos 20^\circ}$$

$$T = 209 \text{ N}$$

$$F_A = F_g \tan 20^\circ$$

$$F_A = 71.3 \text{ N}$$