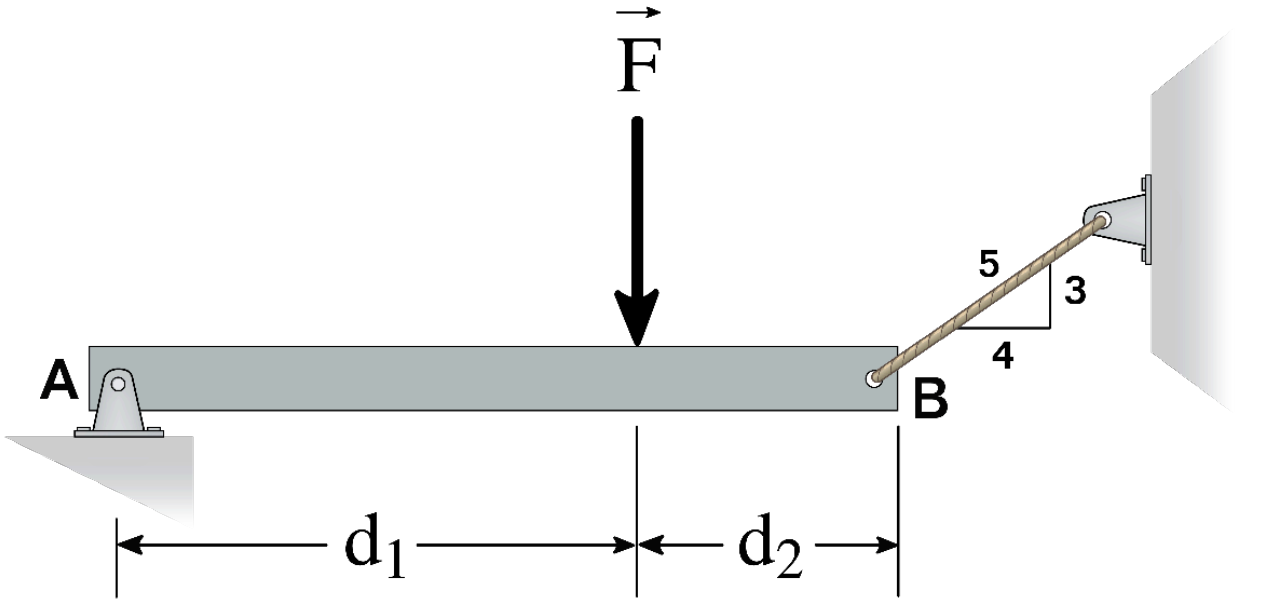

A bar with uniform mass is supported by a pin connection at point A and a cable at point B. Identify the forces needed for the FBD.

What is the horizontal distance between support A and the bar's centre of gravity?

$$d_{center} = \frac{d_1 + d_2}{2}$$

Which of the following components are unknown?

A_x

A_y

F_B

What is the smallest angle between the line of action of the force applied by the cable and the horizontal axis?

$$\theta = \arctan\left(\frac{3}{4}\right)$$

Which of the following unknowns have limitations in its range (Ex. vector cannot be inverted)?

F_B