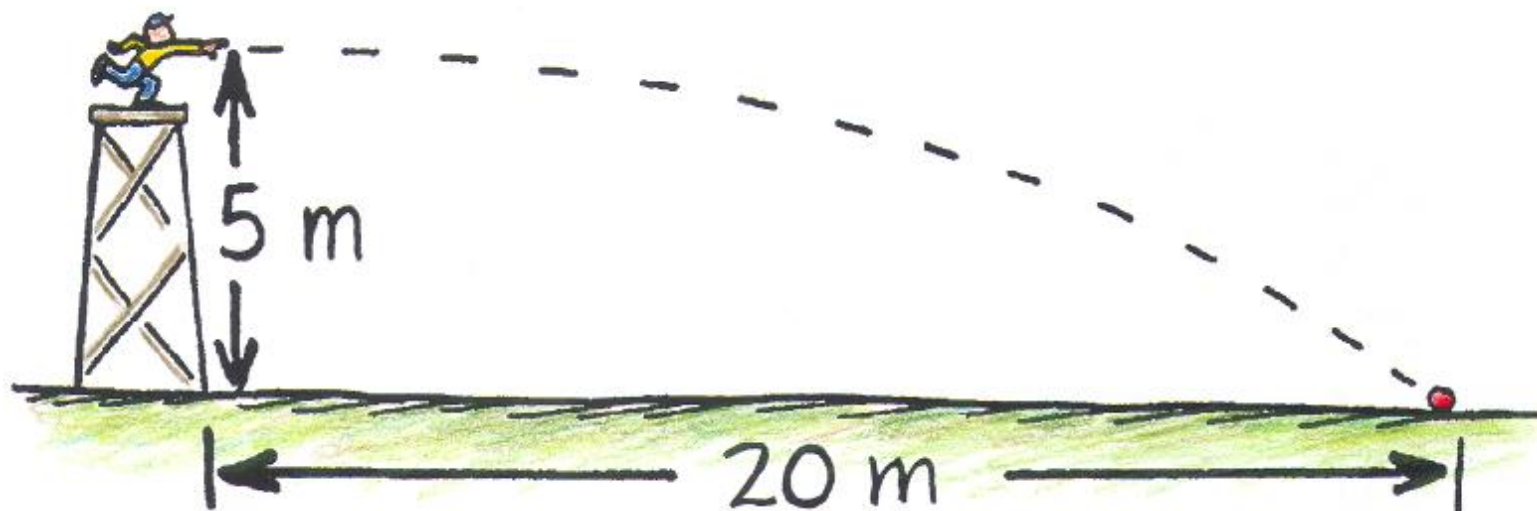


# NEXT-TIME QUESTION

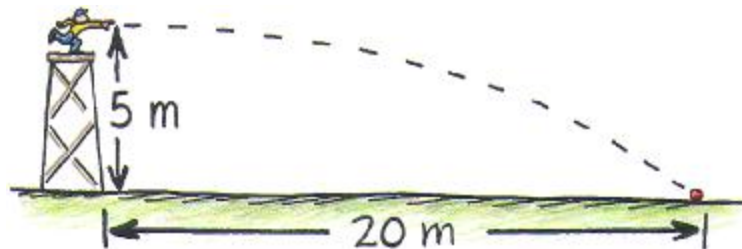
The boy on the tower throws a ball 20 meters downrange as shown.



What is his pitching speed?

# NEXT-TIME QUESTION

The boy on the tower throws a ball 20 meters downrange as shown.



What is his pitching speed?

Solution: 20 m/s

Use the equation for speed as a "guide to thinking."

$$v = \frac{d}{t}$$

$d$  is 20 m; but we don't know  $t$ ... the time the ball takes to go 20 meters. But while the ball moves horizontally 20 meters, it falls a vertical distance of 5 meters, which takes 1 second... so  $t = 1$  s.

$$v = \frac{d}{t} = \frac{20 \text{ m}}{1 \text{ s}} = 20 \text{ m/s}$$

