

PROBLEM-OF-THE-DAY: ALGEBRA 1**WEEK:** November 5 to November 9**DAY:** Monday

RISD Objective: Given a problem which reflects proportional reasoning, students will write a proportion which models the situation and solve it.

PROBLEM #53

The CSI team wants to determine the height of the bad guy in the photo below. They know the actual stop sign is 8 feet tall. In the photo, the stop sign is 5 inches tall and the bad guy is 4 inches tall. Use this information to help the CSI team to determine the actual height of the bad guy. Show and explain your work.



MODEL SOLUTION #53

To solve this problem, I will set up the following proportion:

$$\frac{\text{actual_stop_sign}}{\text{picture_stop_sign}} = \frac{\text{actual_bad_guy}}{\text{picture_bad_guy}}$$

$$\frac{8\text{ft}}{5\text{in}} = \frac{X\text{ft}}{4\text{in}}$$

$$\frac{8}{5} = \frac{x}{4}$$

$$5x = 32$$

$$x = \frac{32}{5} = 6\frac{2}{5} = 6.4 \text{ feet tall}$$

$$\left(\frac{0.4\text{feet}}{1\text{foot}}\right)\left(\frac{12\text{in}}{1\text{foot}}\right) = 4.8\text{inches}$$

So the bad guy is about 6 feet 5 inches tall. A tall bad guy!