

PROBLEM-OF-THE-DAY: ALGEBRA 1

WEEK: January 28 to February 1

DAY: Tuesday

RISD Objective: Provided the length of a leg of a right triangle and a hypotenuse (including word problems), students will use the Pythagorean Theorem to find the length of the other leg, applying it as necessary.

PROBLEM #92

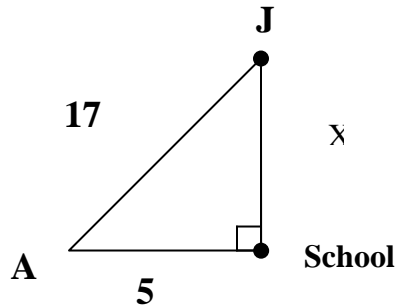
Angelica and James leave their school at the same time.

Angelica drives due east for five miles. James drives due north.

They drive until they are 17 miles apart. How far did James drive?

MODEL SOLUTION #92

Draw a picture:



We will use the Pythagorean Theorem to find the missing side'
Pythagorean Theorem:

$$\text{leg}^2 + \text{leg}^2 = \text{leg}^2$$

$$5^2 + X^2 = 17^2$$

$$25 + X^2 = 289$$

$$X^2 = 264$$

$$X = 16.2$$

James drove for about 16.2 miles.