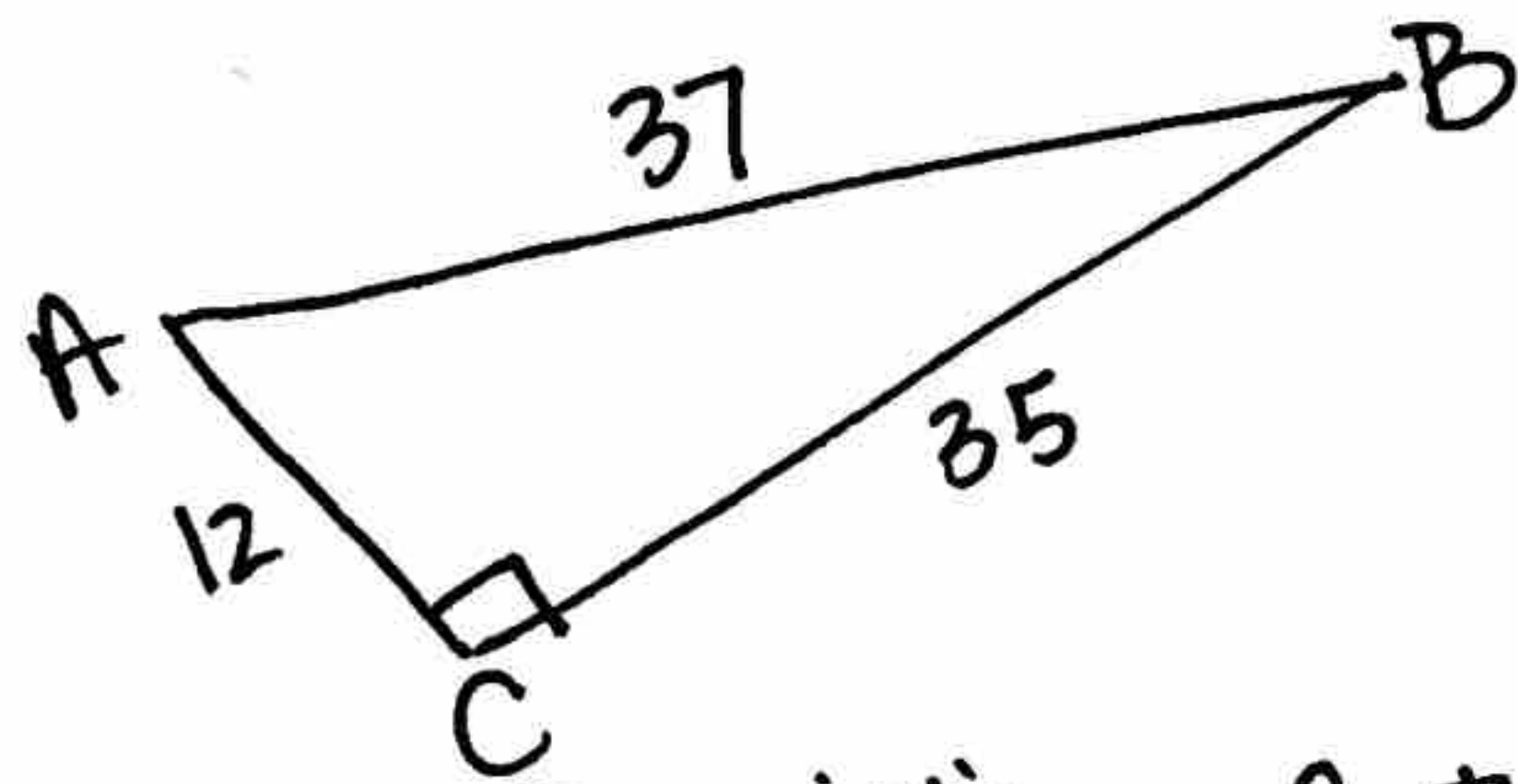


These are real mistakes made by Mrs. Verti's students.
Explain each mistake.

HW #54. My favorite No!

- ③ Find the tangent of $\angle A$ and $\angle B$. Write each ratio as a fraction and as a decimal rounded to the nearest hundredth.



Description of the mistake that was made.

Mistake #1

$$\tan A = \frac{12}{35} \approx 0.34$$

$$\tan B = \frac{35}{12} \approx 2.92$$

Mistake #2

$$\tan 12 = 0.21$$

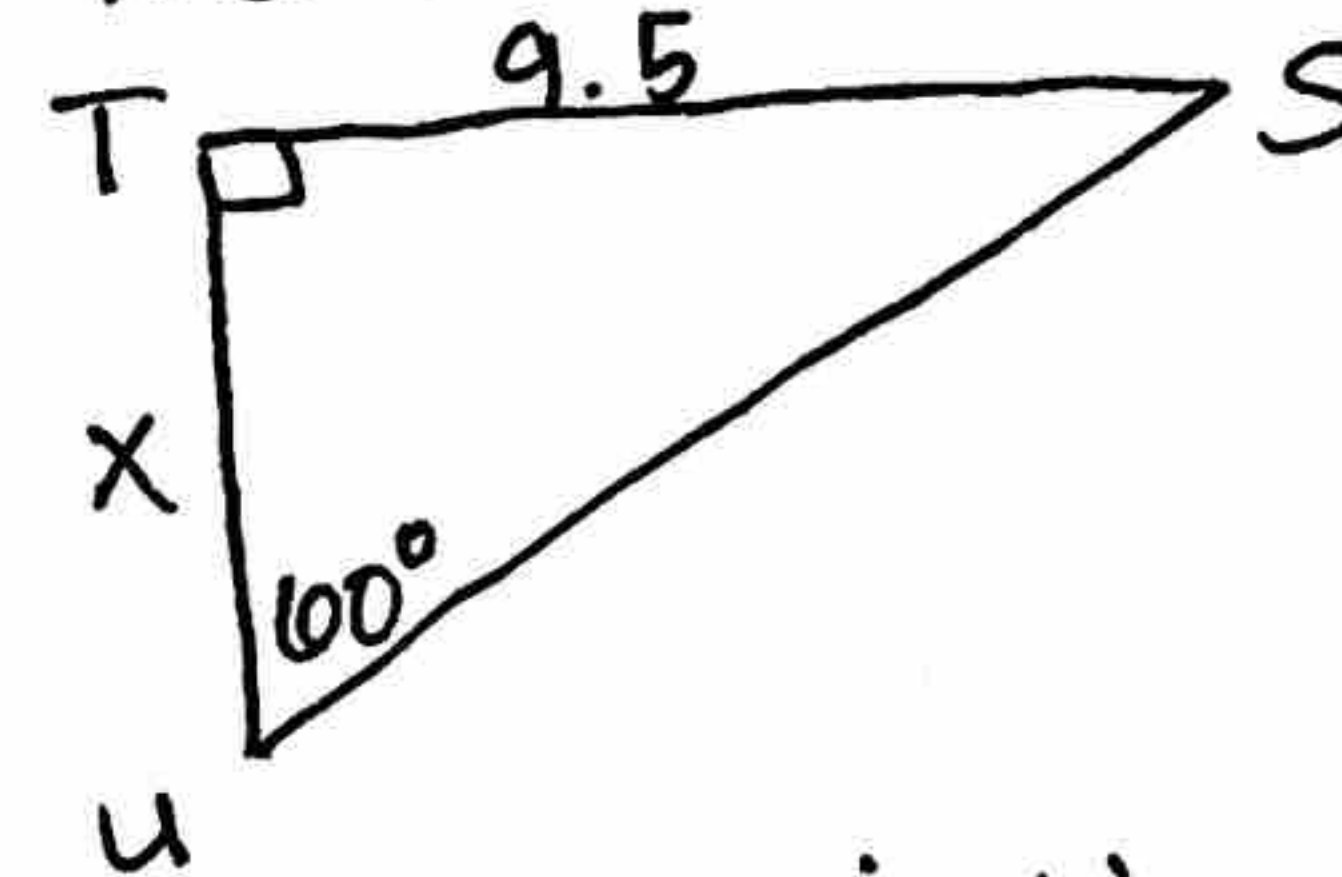
$$\tan 35 = 0.70$$

Mistake #3

$$\tan A = \frac{12}{37} \approx 1.15$$

$$\tan B = \frac{37}{12} \approx .304$$

- ⑤ Find the value of x to the nearest tenth.



Description of the mistake.

Mistake #1

$$\tan 60^\circ = \frac{9.5}{x}$$

$$x \approx 16.45$$

Mistake #2

$$\tan 60^\circ = \frac{9.5}{x}$$

$$x \approx 0.18$$

Mistake #3

$$\tan 60^\circ = \frac{x}{9.5}$$

$$x = 16.5$$

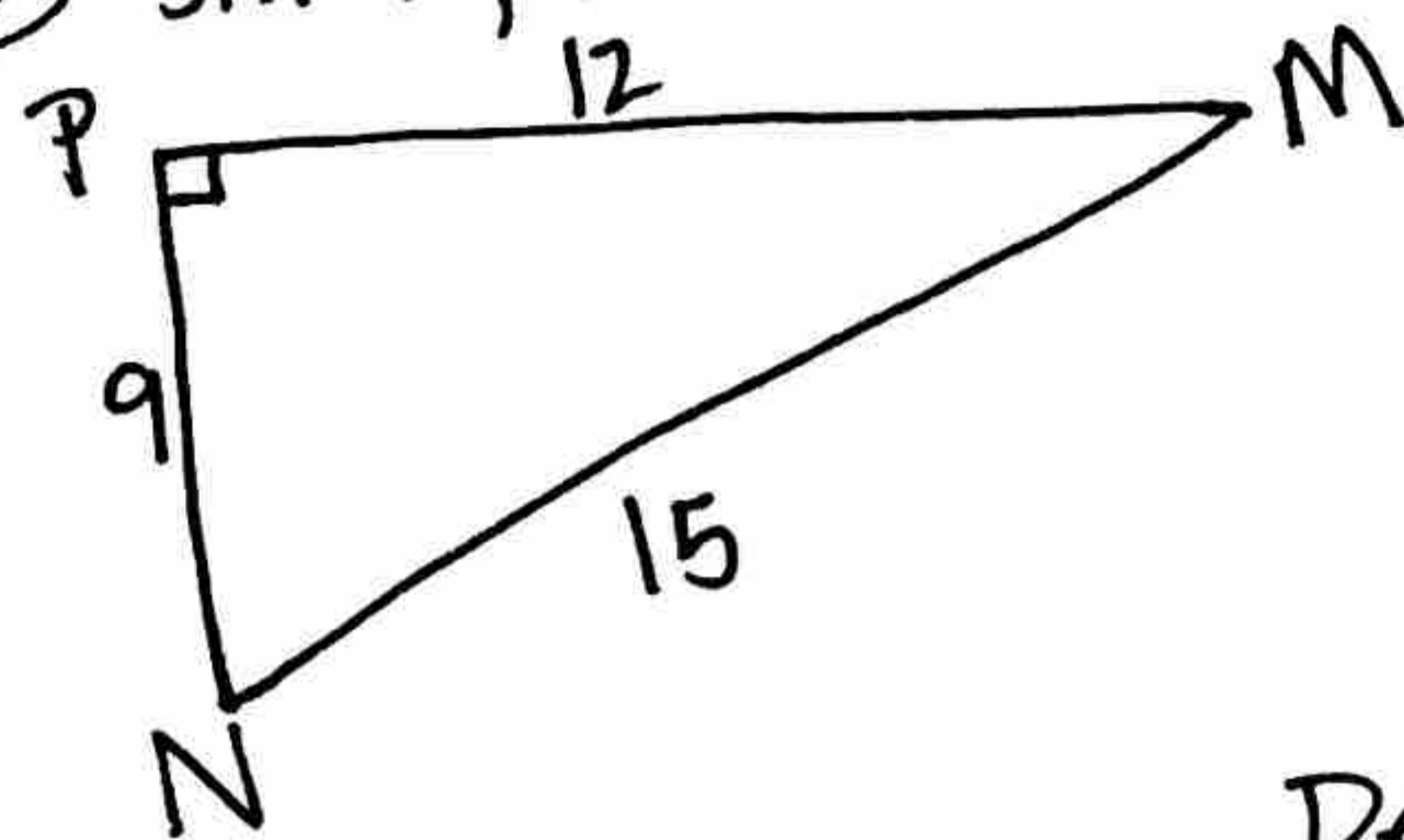
Mistake #4

$$\tan 60 = \frac{9.5}{x}$$

$$x \approx 5.49$$

Find the given trigonometric ratios. Write each ratio as a fraction and as a decimal rounded to the nearest hundredth.

(11) $\sin M, \sin N$



Description of the mistake

Mistake #1

$$\sin M = \frac{12}{15} = \frac{4}{5} = 0.8$$

$$\sin N = \frac{9}{15} = \frac{3}{5} = 0.6$$

Mistake #2

$$\sin M = \frac{9}{12} = \frac{3}{4} = 0.75$$

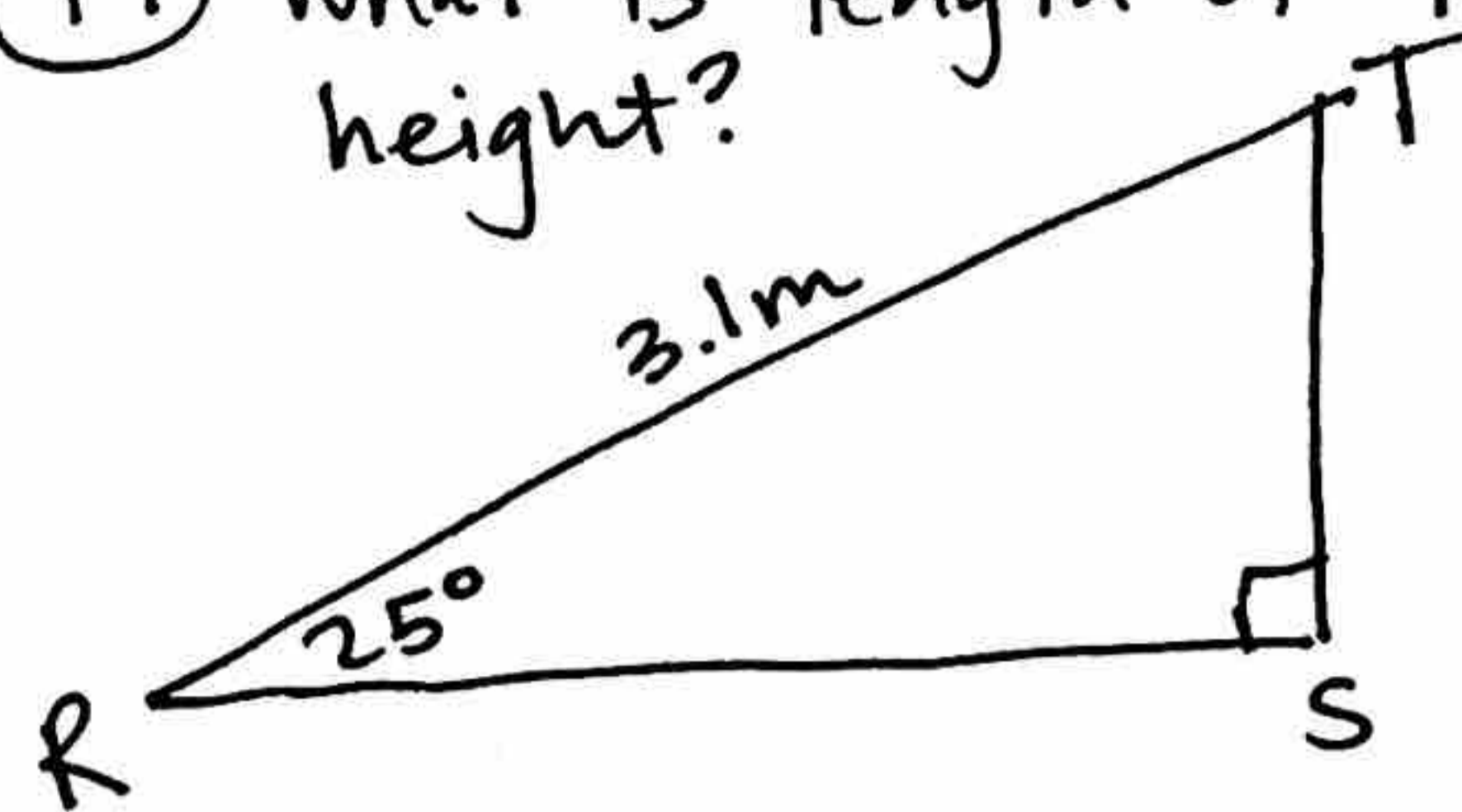
$$\sin N = \frac{12}{15} = \frac{4}{5} = 0.80$$

Mistake #3

$$\sin M = \frac{15}{9} \approx 1.67$$

$$\sin N = \frac{15}{12} \approx 1.25$$

(17) word problem
What is length of ramp's base? What is its height?



~~* mistake *~~

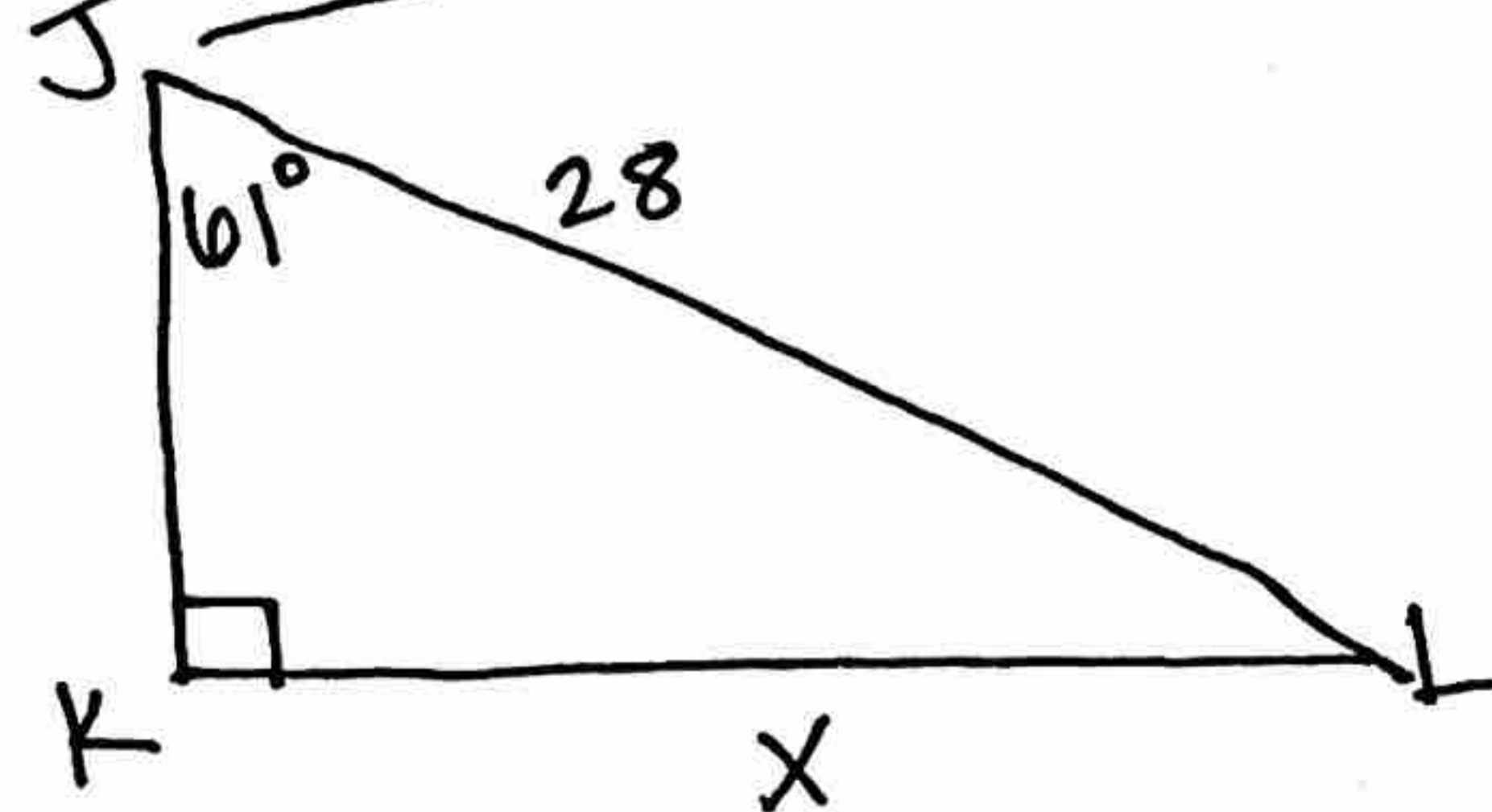
$$\frac{\cos(25)}{1} = \frac{x}{3.1} \quad \text{base} = 2.8\text{m}$$

$$\frac{\sin(25)}{1} = \frac{2.8}{x} \quad \text{height} = 6.0\text{m}$$

(13) Given that $\cos 62^\circ \approx 0.469$, write the sine of a complementary angle.

~~* mistake *~~ $\sin 62 = 0.88$

(15) Find the value of x to the nearest tenth.



~~* mistake *~~

$$\cos 61 = \frac{28}{x}$$

$$x \approx 57.75$$

Follow-up: If you got $x \approx 57.75$ in the previous problem, how do you know from the figure that the answer is incorrect?