



h) Given the formula for the area of a trapezoid,  $A = \frac{h(a+b)}{2}$ , rearrange it for the base ( $b$ ).

i) Given the volume of a cone (yum, ice cream),  $V = \frac{\pi r^2 h}{3}$ , solve for the radius of the cone,  $r$ .

j) Given the physics equation to find the gravitational force between two bodies,  $F_g = G \frac{m_1 m_2}{d^2}$ , rearrange to solve for the distance,  $d$ .

k) Given the formula for the converting Celsius to Fahrenheit,  $F = \frac{9}{5}C + 32$ , solve it for Celsius,  $C$ .

l) Given  $(v_2)^2 = (v_1)^2 + 2a(d_2 - d_1)$

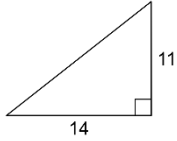
Rearrange the equation for the initial velocity,  $v_1$

**Application:** The infamous Pythagorean Theorem is essentially an equation. As long as we have enough information, we can use it to solve. This section is to figure how Pythagorean Theorem can be used to solve for missing sides in right-angled triangle.

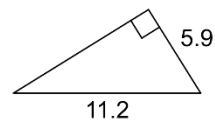
**Part One: *Pythagorean Theorem***

Given the following triangles, label the sides a, b, and c, then solve for the missing side.

1.



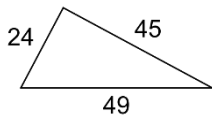
2.



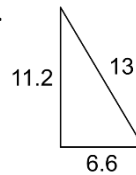
**Part Two: *Converse of Pythagorean Theorem***

Given the following triangles, use the Pythagorean Theorem to prove whether or not the triangle is a right-angled triangle. First, label the sides.

1.



2.



**Part Three:** Read the question twice. Draw the situation (probably utilizing a right-angled triangle). Label the information that you know. Solve for the missing side. Write the answer to the question in the sentence.

1. A television screen is described in terms of the diagonal measure of its screen. If a TV screen is 20 inches wide and 15 inches high, what is the length of its diagonal (and hence, the size of the TV)?

**Success Criteria:**

- I can rearrange a formula by using inverse operations.
- I can use the Pythagorean Theorem to solve for a missing side in a triangle.