

Warm Up

The height of a triangular window is 3 feet less than its base. If the area of the window is 20 square feet, find the dimensions of the window.

Find three consecutive integers such that four times the sum of all three is 2 times the product of the larger two.

The longer leg of a right triangle is ten less than three times the shorter leg. The hypotenuse is 4 more than the shorter leg. Find the length of the shorter leg.

Warm up

1. Solve for x:  $x^2 - 12 = 24$

2. The longer leg of a right triangle is ten less than three times the shorter leg. The hypotenuse is 4 more than the shorter leg. Find the length of the shorter leg.

3. Find three consecutive integers such that four times the sum of all three is 2 times the product of the larger two.

Tests



MAP Reflections

Unit Tab

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A square and triangle have the same area. The triangle has a base 2 greater than the width of the square. The height of the triangle is 3 less than twice the width of the square. What is the perimeter of the square?

The diagram shows a square with side length  $s$  and a triangle with base  $s+2$  and height  $2s-3$ . The area of the square is  $A_{\square} = s^2$  and the area of the triangle is  $A_{\triangle} = \frac{1}{2}(s+2)(2s-3)$ . The handwritten work shows the following steps:

$$A_{\square} = A_{\triangle}$$

$$s^2 = \frac{1}{2}bh$$

$$2s^2 = \frac{1}{2}(s+2)(2s-3)$$

$$2s^2 = s^2 + s - 6$$

$$0 = s - 6$$

$$6 = s$$

Additional handwritten notes include "24 in" circled in red, "h=2s-3" with an arrow pointing to the triangle's height, and "Perim?" circled in red.

Partner Practice