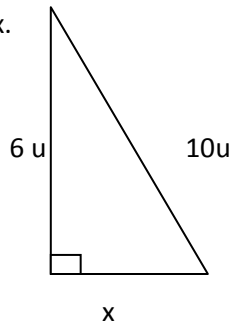


Exemplars for Geometry Semester 1 Anchor Assignment

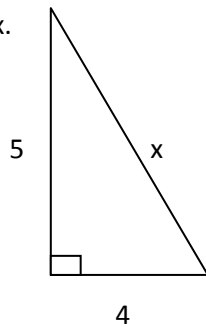
2010

1. Solve for x.



$$\begin{aligned}x^2 + 6^2 &= 10^2 \\x^2 + 36 &= 100 \\x^2 &= 100 - 36 \\x^2 &= 64 \\x &= \sqrt{64} \\x &= 8u\end{aligned}$$

2. Solve for x.



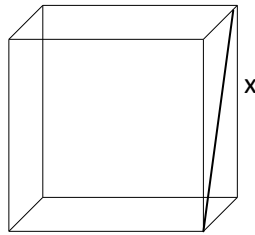
$$\begin{aligned}4^2 + 5^2 &= x^2 \\16 + 25 &= x^2 \\41 &= x^2 \\ \sqrt{41} u^2 &= x \\x &\approx 6.40 u\end{aligned}$$

3. A right triangle has sides that measure $8u$, $6u$, and $5u$. Is the triangle a right triangle?

Check $5^2 + 6^2 = 8^2$
 $25 + 36 = 64$

$61 \neq 64$ No, it is not a right triangle.

4. Find the length d , of a diagonal of a cube.
The cube side measures 1 unit.



$$1^2 + 1^2 = x^2$$

$$2 = x^2$$

$$\sqrt{2} = x$$

$$1^2 + \sqrt{2}^2 = d^2$$

$$1 + 2 = d^2$$

$$3 = d^2$$

$$\sqrt{3} = d$$

$$1.73u \approx d$$

5. A painter leans a 13-ft ladder against a house. The base of the ladder is 5 ft from the house. The ladder is too high. By how much should the painter move the ladders base away from the house to lower the top by 1 foot?

$$5^2 + x^2 = 13^2$$

$$25 + x^2 = 169$$

$$x^2 = 144$$

$$x = 12$$

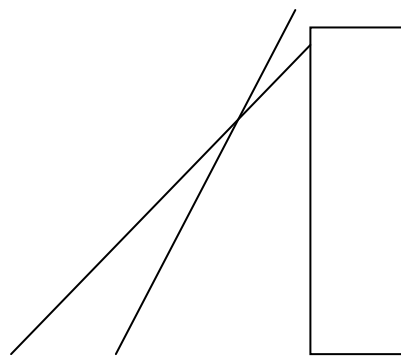
$$y^2 + (11)^2 = 15^2$$

$$y^2 + 121 = 225$$

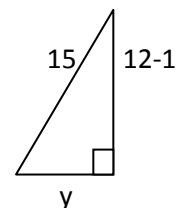
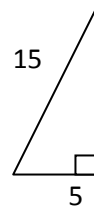
$$y^2 = 104$$

$$y = \sqrt{104}$$

$$y \approx 10.20u$$



original placement after adjustment



More examples from the book

Pg. 536 Examples 1-4

Pg. 543 (22-24)

Pg. 549 (31-33)

Pg. 592 (22-23)

Pg. 593 #8