18. $2\sqrt{3}(\sqrt{3} - 1)$ $6 - 2\sqrt{3}$

20. $\sqrt{2}(3 + 3\sqrt{2})$ $3\sqrt{2} + 6$

22. $(3\sqrt{2} + \sqrt{3})(\sqrt{2} - 5\sqrt{3})$ $-9 - 14\sqrt{6}$

24. $(\sqrt{7} - 2)^2$ $11 - 4\sqrt{7}$

26. $(2\sqrt{11} + 5)(\sqrt{11} + 2)$ $32 + 9\sqrt{11}$

39. $3\sqrt{2}(2 + \sqrt{6})$

$6\sqrt{2} + 6\sqrt{3}$

40. $\sqrt{12} + 4\sqrt{75} - \sqrt{36}$

$22\sqrt{3} - 6$

77. $\dfrac{\sqrt{12}}{\sqrt{18}}$ $\dfrac{\sqrt{6}}{3}$

78. $\sqrt{5 \cdot 10}$ $5\sqrt{2}$

79. $\sqrt{40b^5}$ $2b^2\sqrt{10b}$

$$2\sqrt{3}(\sqrt{3} - 1)$$

$2\sqrt{9} - 2\sqrt{3}$

$2 \cdot 3 - 2\sqrt{3}$

$\boxed{6 - 2\sqrt{3}}$

$$(3\sqrt{2} + \sqrt{3})(\sqrt{2} - 5\sqrt{3})$$

$3\sqrt{2}\cdot\sqrt{2} - 3\sqrt{2}\cdot 5\sqrt{3} + \sqrt{3}\cdot\sqrt{2} - \sqrt{3}\cdot 5\sqrt{3}$

$3\sqrt{4} \quad -15\sqrt{6} \quad +\sqrt{6} \quad -5\sqrt{9}$

$3\cdot 2 \quad\quad\quad\quad -5\cdot 3$

$6 \quad -14\sqrt{6} \quad -15$

$\boxed{-9 - 14\sqrt{6}}$

Simplify

$2\sqrt{12} - 7\sqrt{3}$

$2\sqrt{4}\sqrt{3} - 7\sqrt{3}$

$2 \cdot 2\sqrt{3} - 7\sqrt{3}$

$4\sqrt{3} - 7\sqrt{3}$

$\boxed{-3\sqrt{3}}$

$4\sqrt{5}(\sqrt{5} - 2\sqrt{10})$

$4\sqrt{25} - 8\sqrt{50}$

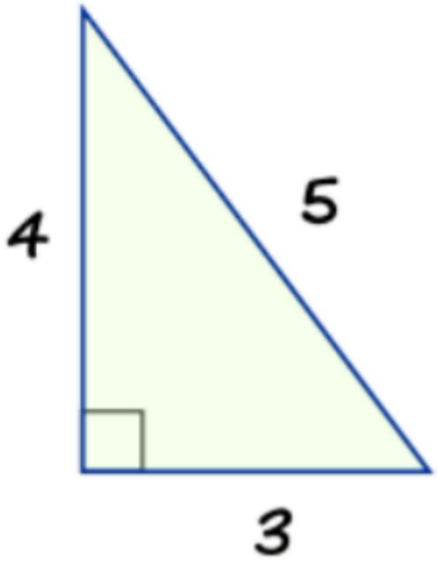
$4 \cdot 5 - 8\sqrt{25}\cdot\sqrt{2}$

$20 - 4 \cdot 5\sqrt{2}$

$\boxed{20 - 4\sqrt{10}}$

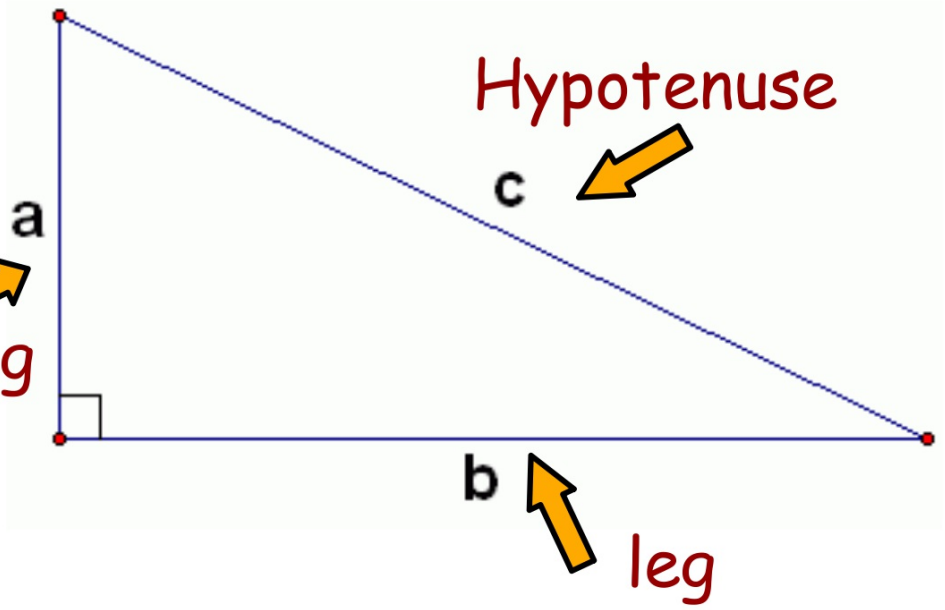
Algebra Bellwork May 19, 2011

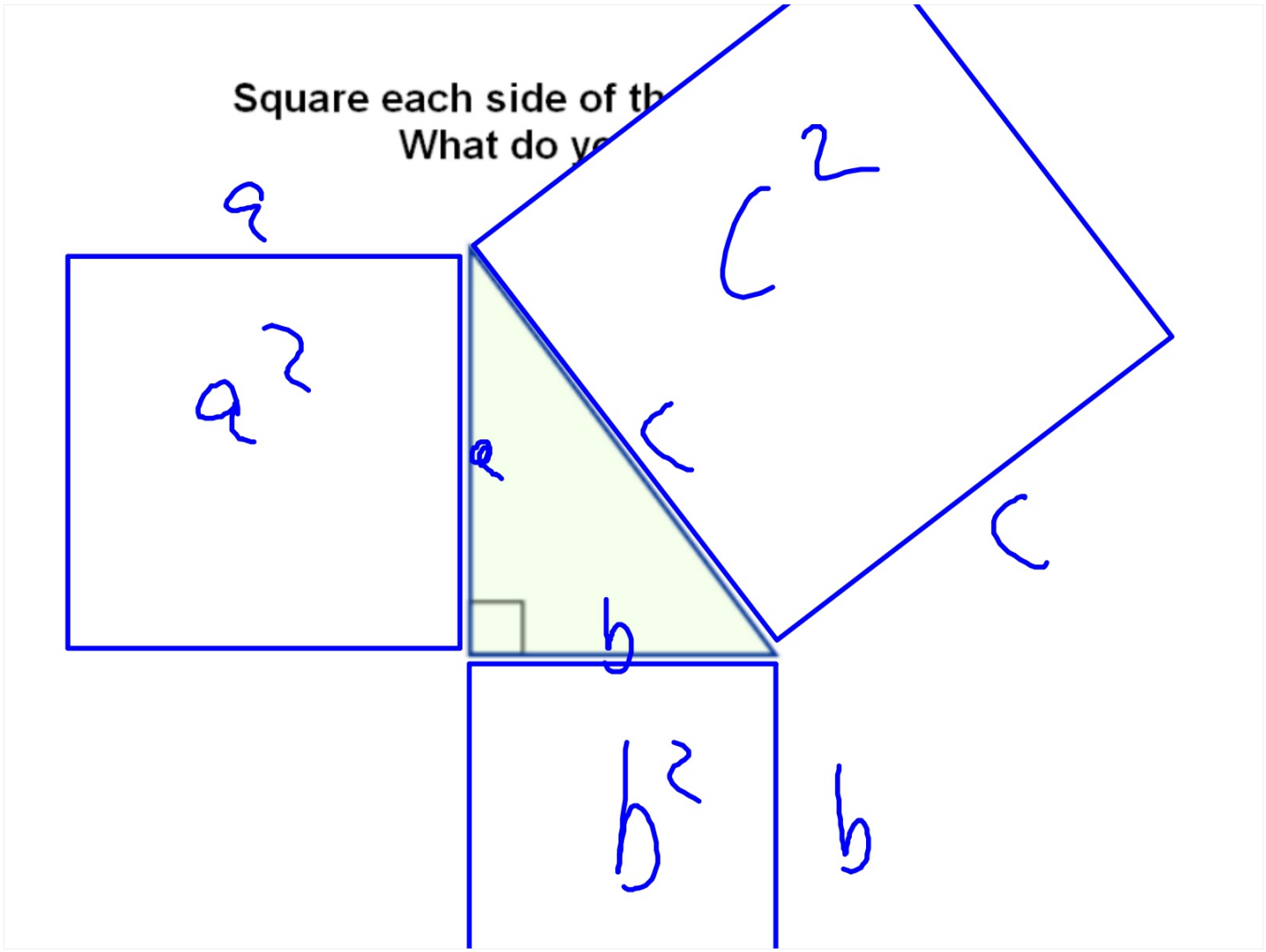
Square each side of the right triangle.
What do you notice?



Pythagorean Theorem

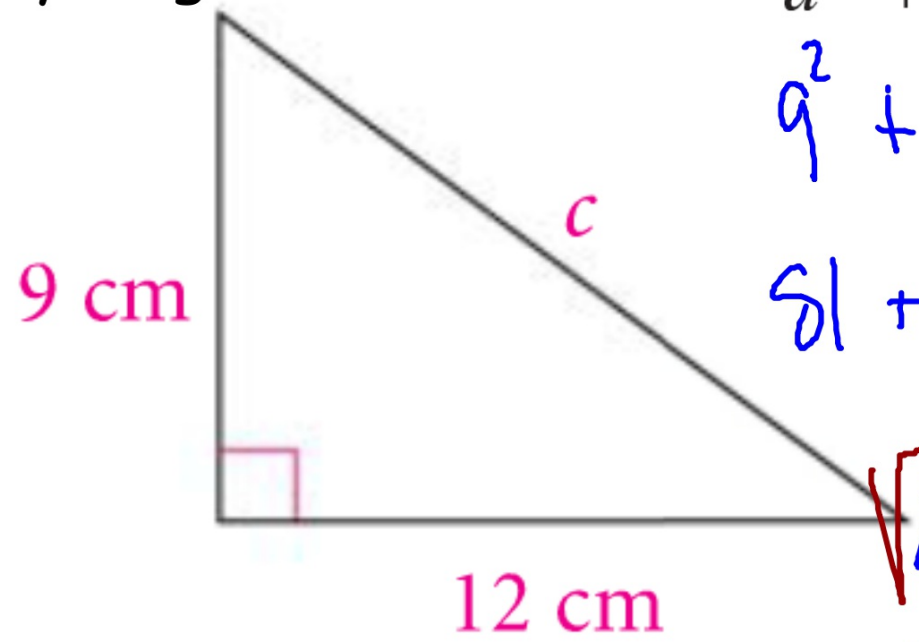
$$a^2 + b^2 = c^2$$




Square each side of th
What do yo
a
a^2
a
c
c^2
c
b
b^2
b

Pythagorean Theorem

$$a^2 + b^2 = c^2$$



$9^2 + 12^2 = c^2$

$81 + 144 = c^2$

$\sqrt{225} = \sqrt{c^2}$

$15 = c$

Do these sides form a right triangle?

a b c

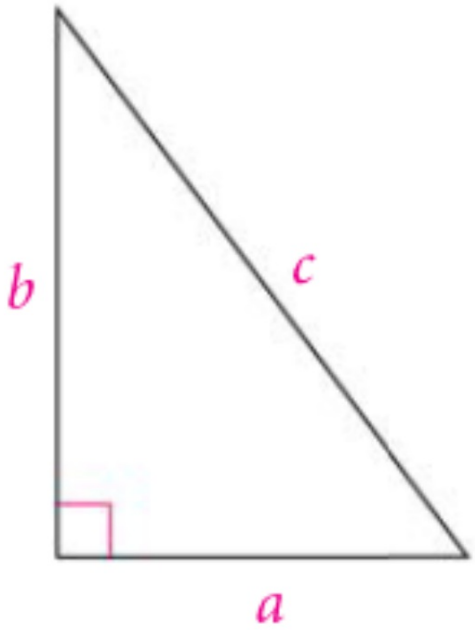
6, 8, 10

$a^2 + b^2 = c^2$

$6^2 + 8^2 \stackrel{?}{=} 10^2$

$36 + 64 \stackrel{?}{=} 100$

$100 = 100$ ✓


b
c
a

1. $a = 6, b = 8$

2. $a = 15, b = 20$

3. $a = 8, b = 15$

4. $a = 10, b = 24$

5. $a = 1.5, b = 2$

6. $a = \frac{3}{5}, b = \frac{4}{5}$

7. $a = 3, c = 5$

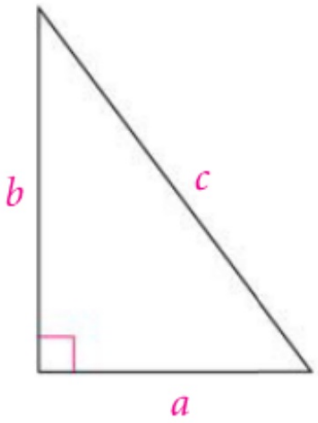
8. $b = 12, c = 13$

9. $a = 9, c = 15$

10. $b = 7, c = 10$

1. $a = 5, c = 9$

12. $a = 0.8, c = 1$



Determine whether the given lengths can be sides of a right triangle.

16. 9 ft, 12 ft, 15 ft

17. 1 in., 2 in., 3 in.

18. 2 m, 4 m, 5 m