December 1, 2017

#3) $\sqrt{512k^2}$

$\sqrt{512} \cdot \sqrt{k^2}$

$\sqrt{64 \cdot 8} \cdot k$

$\sqrt{64} \cdot \sqrt{8} \cdot k$

$8 \cdot \sqrt{8} \cdot k$

$8 \cdot \sqrt{4 \cdot 2} \cdot k$

$8 \cdot \sqrt{4} \cdot \sqrt{2} \cdot k$

$8 \cdot 2 \cdot \sqrt{2} \cdot k$

$16k\sqrt{2}$

3) $\sqrt{5x} = ?$

$\sqrt{3^2 \cdot 5x}$

$\sqrt{9 \cdot 5x}$

$\sqrt{45x}$

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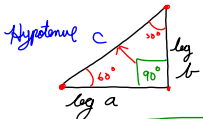
Pythagorean Theorem

4000 YBCE

Pythagoras 500 – 470 YBC



$30° + 60° + 90° = 180°$

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

$(3)^2 + (4)^2 = (5)^2$

$9 + 16 = 25$

$25 = 25$ ✓

Triples:

a, b, c

3, 4, 5

5, 12, 13

7, 24, 25

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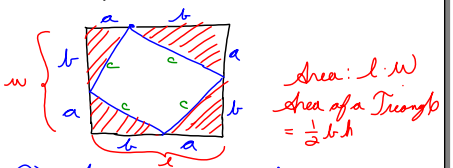
Proof



Area: $l \cdot w$

Area of a Triangle $= \frac{1}{2}bh$

① Area of the lg. Square

$A = (a+b)(a+b)$

$= a^2 + 2ab + b^2$

② $4\left(\frac{1}{2}ab\right) + c^2$

$A = 2ab + c^2$

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

$-2ab \quad\quad -2ab$

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

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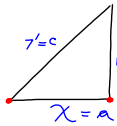
$a^2 + b^2 = c^2$



$x = a = 6\sqrt{2}$ '

$x^2 + (7)^2 = (11)^2$

$x^2 + 49 = 121$

$\sqrt{x^2} = \pm\sqrt{72}$

$x = +\sqrt{72}$

$= +\sqrt{36 \cdot 2}$

$= +\sqrt{36} \cdot \sqrt{2}$

$= +6\sqrt{2}$

Dec 1-9:42 AM