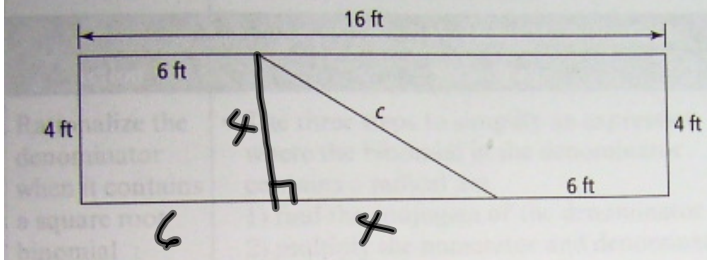
Use Document Camera

Pick a couple of problems from workbook, pages 196 - 197 for a quick review

11. Jodie has a rectangular piece of wood with a width of 4 ft and length of 16 ft. She is cutting it to create two large tables of the exact same size. She cuts the length diagonally to create two trapezoids. The smaller side of each trapezoid that results from the cut is 6 ft. What is the length of the diagonal cut, c? Show your reasoning.



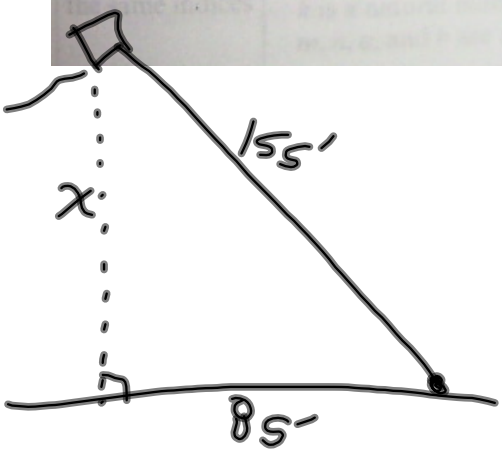
$c^2 = 16 + 16$

$c^2 = 32$

$c = \sqrt{32}$

$c = 4\sqrt{2}$ feet

12. Tyrus is flying a kite. He lets out 155 ft of string, ties the string to a tent peg, and pounds the peg into the ground. He then measures the distance to the point directly below the kite. He finds this distance to be 85 ft. Assuming that the kite string is taut, how high is the kite? Show your reasoning.



$x^2 = 155^2 - 85^2$

$x^2 = 16\,800$

$x = \sqrt{16\,800}$

$x = 20\sqrt{42}$ feet

#5e) $(30x + \sqrt{80}) - (20x - \sqrt{20})$

$= 30x + 4\sqrt{5} - 20x + 2\sqrt{5}$

$= 10x + 6\sqrt{5}$

$x\sqrt{5} + 7x$

$5x$

f) $5 + 6x\sqrt{2} \neq 6\sqrt{2}x + 5$

$\left(5x\sqrt{2}\right)^2\left(-2x^7\sqrt{12x^5}\right)$

$\left[(25x^2)(2)\right]\left(-2x^7\sqrt{4\cdot3x^4x}\right)$

$(50x^2)(-4x^9\sqrt{3x})$

$=-200x^{11}\sqrt{3x}$

ex. $(3\sqrt{6})^2$

$=(3)^2(\sqrt{6})^2$

$=9\cdot6$

$=54$

$\left(5+4\sqrt{3}\right)^2$

$=(5+4\sqrt{3})(5+4\sqrt{3})$

$=25+20\sqrt{3}+20\sqrt{3}+48$

$=73+40\sqrt{3}$

$(3w-5)^2$

$=9w^2-30w+25$ ← Square 2nd

① Square first

② 1st x 2nd doubled

3 step Rule

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

$(3\sqrt{18})2$

$=27+6\sqrt{18}+6$

$=33+18\sqrt{2}$

And now the grand finale!!

Answer: $=-334-1020\sqrt{2}+360\sqrt{3}+120\sqrt{6}$

$(\sqrt{6}-10\sqrt{3})(\sqrt{6}-10\sqrt{3})$

Simplify: $\left(\sqrt{6}-5\sqrt{12}\right)^2-5\sqrt{32}\left(2+3\sqrt{2}\right)\left(4\sqrt{8}-\sqrt{27}\right)$

$3\times 5\times 2$

$(-10\sqrt{3})^2=100(3)$

$=(\sqrt{6}-10\sqrt{3})^2-20\sqrt{2}(2+3\sqrt{2})(8\sqrt{2}-3\sqrt{3})$

$=6-20\sqrt{18}+300-20\sqrt{2}(16\sqrt{2}-6\sqrt{3}+24(2)-9\sqrt{6})$

$=306-60\sqrt{2}-320(2)+120\sqrt{6}-960\sqrt{2}+180\sqrt{12}$

$=306-60\sqrt{2}-640+120\sqrt{6}-960\sqrt{2}+360\sqrt{3}$

$=-334-1020\sqrt{2}+360\sqrt{3}+120\sqrt{6}$

Homework:

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