Math 05, Homework 11 on Sections 8.4 - 8.5, 9.1 - 9.2
Hand in by Tue, Apr 19 at the start of class.

Write all your working out and answers on a separate sheet. It is very important that you show clearly any work you had to do to get the answer. These first ten questions are 2 points each and **the answers are on page 2**.

(1) Add: $7\sqrt{5} + \sqrt{45}$

(2) Compute: $\dfrac{26}{\sqrt{3}} - 4\sqrt{12}$

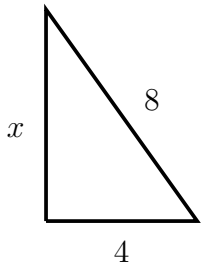
(3) Multiply: $\sqrt{7}\left(2\sqrt{7} - 3\sqrt{21}\right)$

(4) Simplify completely: $\dfrac{\sqrt{2}\sqrt{36}}{\sqrt{6}}$

(5) Solve: $4x^2 = 3$

(6) Solve: $(x+5)^2 = -18$

(7) Find x and simplify it:



(8) Solve by completing the square: $x^2 + 2x = 6$

(9) Solve by completing the square: $x^2 - 8x = -10$

(10) Solve by completing the square: $x^2 + 5x + 6 = 0$

These next eight questions are 2 points each. Show clearly all your working out and reasoning.

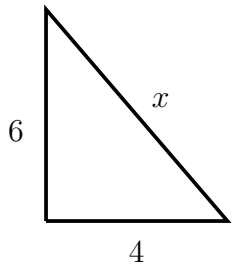
(11) Subtract: $8\sqrt{5} - 5\sqrt{125}$

(12) Multiply: $\sqrt{11}\left(3\sqrt{11} - 4\sqrt{22}\right)$

(13) Simplify completely: $\dfrac{\sqrt{2}\sqrt{98}}{\sqrt{7}}$

(14) Solve: $9x^2 = 5$

(15) Solve: $(x-1)^2 = -1$



(16) Find x and simplify it:

(17) Solve by completing the square: $x^2 + 4x = 1$

(18) Solve by completing the square: $x^2 - 6x = -10$

Answers to questions (1)-(10):

(1) $10\sqrt{5}$

(2) $\dfrac{2\sqrt{3}}{3}$

(3) $14 - 21\sqrt{3}$

(4) $2\sqrt{3}$

(5) $x = \pm\dfrac{\sqrt{3}}{2}$

(6) $x = -5 \pm 3\sqrt{2}i$

(7) $4\sqrt{3}$

(8) $x = -1 \pm \sqrt{7}$

(9) $x = 4 \pm \sqrt{6}$

(10) $x = -2$ or $x = -3$