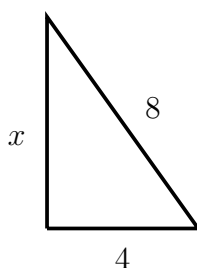**Math 05, Homework 8 on Sections 7.1, 7.2, 7.3, 7.6**
**due Wed, Nov 18.**

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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 1 point each and **the answers are on page 2**.

**(1)** Evaluate: **(a)** $\sqrt{16}$, **(b)** $\sqrt[3]{-64}$, **(c)** $-\sqrt{10000}$

**(2)** Simplify: $\sqrt{500}$



**(3)** Find $x$ and simplify it:

**(4)** Simplify: $\sqrt{\dfrac{7}{9}}$

**(5)** Simplify: $\sqrt{\dfrac{8}{3}}$

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

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

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

**(9)** Simplify completely: $\dfrac{\sqrt{2}\sqrt{36}}{\sqrt{6}}$
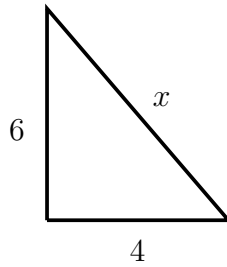
**(10)** Write in terms of $i$: $\sqrt{-49}$

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These next eight questions are 3 points each. Show clearly all your working out and reasoning.

**(11)** Evaluate: **(a)** $\sqrt{169}$, **(b)** $\sqrt[6]{64}$, **(c)** $-\sqrt{1}$

**(12)** Simplify: $\sqrt{\dfrac{18}{7}}$

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

**(14)** Find $x$ and simplify it:

**(15)** Compute:   $\sqrt{20} - \dfrac{1}{\sqrt{5}}$

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

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

**(18)** Write in terms of $i$:   $\sqrt{-64}$

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**Answers to questions (1)-(10):**

*(1)*    **(a)** $4$,    **(b)** $-4$,    **(c)** $-100$

*(2)* $10\sqrt{5}$

*(3)* $4\sqrt{3}$

*(4)* $\dfrac{\sqrt{7}}{3}$

*(5)* $\dfrac{2\sqrt{6}}{3}$

*(6)* $10\sqrt{5}$

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

*(8)* $14 - 21\sqrt{3}$

*(9)* $2\sqrt{3}$

*(10)* $7i$