Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_

Class worksheet: Alg2H

Radicals and Complex Numbers extra-fun

(book chapter 7)

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| Factor(show your work!)$$6x^{2}+x-12$$ | Find the slope of the line perpendicular to the line:$$3x+5y=-13$$ |

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| 1. Is the expressions $2⋅\sqrt{\frac{2}{3}}$ (in words: Two times square-root of two over three) equal to, greater than, or smaller than, $\sqrt{2\frac{2}{3}}$ (in words: square-root of two and two thirds) ?

(Show your work). |
| 1. (challenging) Solve:

$$\frac{2}{3}\sqrt{4.5}+\frac{3}{2}\sqrt[3]{16 }+\frac{1}{4}\sqrt{72} $$ |

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| 1. (challenging) Without using a calculator, determine which is larger:

$5\sqrt[3]{2}$ or $2\sqrt[3]{31} $. |
| 1. (challenging) Find the value of:

$$x= \sqrt{6+\sqrt{6+\sqrt{6+\sqrt{6+\cdots }}}}$$ |