

*key.***Practice Problems for Review in Class****Section: 5.2: Problem Solving**

1.) Josef wants to earn \$63.75 in interest this year. He has \$1400 to split between his checking account, which pays 2.5% interest, and his savings account, which pays 5% interest. How should Josef divide his money?

see 5.2 key.

2.) Reese has \$225 in ten dollar bills and five dollar bills. The number of five dollar bills is 15 more than the number of ten dollar bills. How many of each does he have?

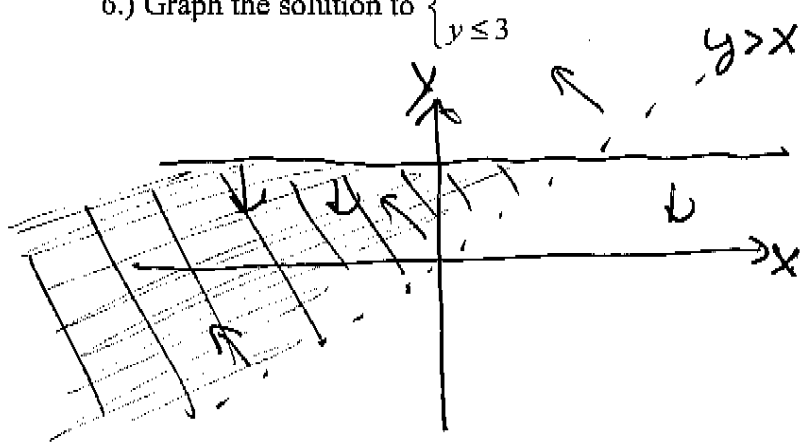
3.) Casey has 15 pounds of cashews that sell for \$5.25 per pound. If peanuts sell for \$2.50 per pound, how many pounds of peanuts should he add to the cashews to obtain a mixture that will sell for \$3.75 per pound?

4.) Two years ago, Taz was three times as old as Gel will be in one year. In four years, Taz will be fifteen times Gel's age last year. How old are Taz and Gel today?

5.) Dory has a solution that is 65% boric acid and a solution that is 15% boric acid. How much of each should she use to obtain 300ml of a solution that is 35% boric acid?

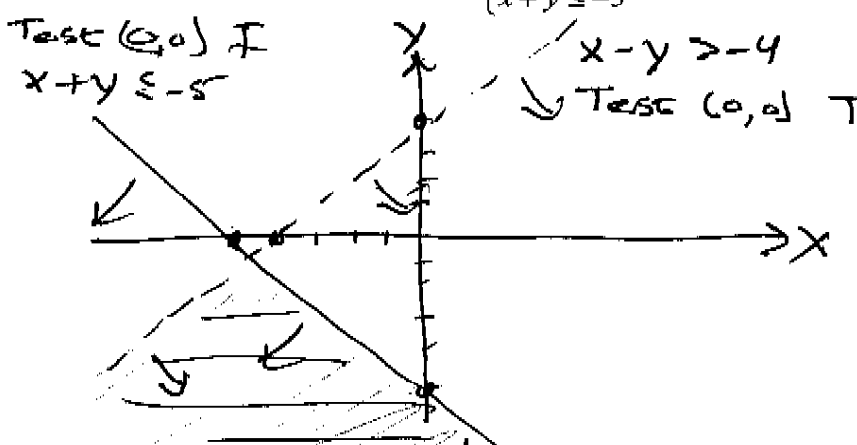
Section: 5.3: Systems of Inequalities

6.) Graph the solution to $\begin{cases} y > x \\ y \leq 3 \end{cases}$



$y > x$
 $y \leq 3$
 Test (0,0)
 $0 \leq 3$
 True
 Test (1,-1)
 $-1 > 1$ F

7.) Graph the solution to $\begin{cases} x - y > -4 \\ x + y \leq -5 \end{cases}$



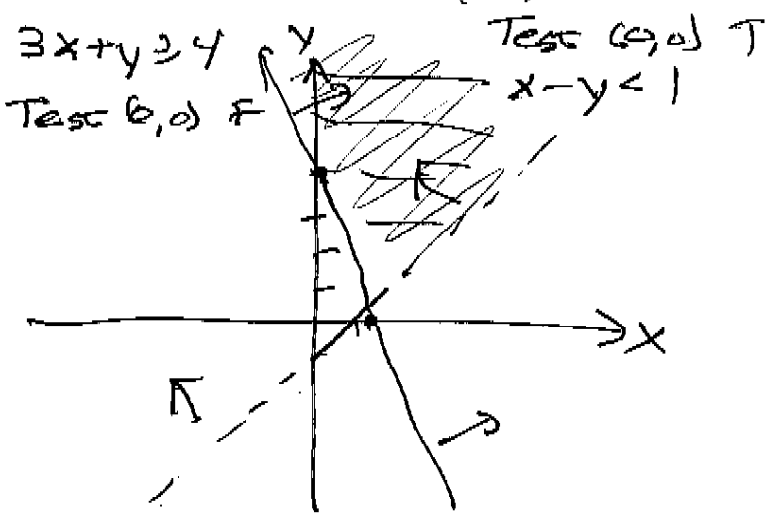
$x - y = -4$

x	y
0	4
-4	0

$x + y = -5$

x	y
0	-5
-5	0

8.) Graph the solution to $\begin{cases} 3x + y \geq 4 \\ x - y < 1 \end{cases}$



$3x + y = 4$

x	y
0	4
4/3	0

$x - y = 1$

x	y
0	-1
1	0

Section: 9.1: Roots and Radicals

9.) Simplify $\sqrt{147a^{17}b^4}$

10.) Solve $13 - \sqrt{x} = 4$

see 9.1 key

11.) Solve $\sqrt{2x-3} + 16 = 19$

12.) Simplify $\sqrt{3} - \sqrt{12} + \sqrt{27}$

13.) Simplify $\frac{3}{1+\sqrt{7}}$

14.) $(4\sqrt{5} + 3)(2\sqrt{7} - 5)$

Section: 9.2: Rational Exponents

15.) Evaluate $\sqrt[3]{-32}$

16.) Evaluate $\sqrt[4]{\frac{625}{1296}}$

see 9.2 key

17.) Rewrite $\sqrt[3]{312^4}$ using rational exponents:

18.) Find $x^{\frac{1}{5}} \cdot x^{\frac{2}{3}}$

19.) Simplify $\sqrt[3]{192a^3b^5c^9}$

20.) Simplify $\sqrt[3]{128x} + 2\sqrt[3]{16x^4} - \sqrt[3]{54x}$

21.) Simplify $3\sqrt{2y}(7\sqrt{10y} + 4\sqrt{3})$

22.) Simplify $(5\sqrt{2y} - \sqrt{3x})(5\sqrt{2y} + \sqrt{3x})$

23.) Simplify $\frac{x - \sqrt{3}}{x + \sqrt{3}}$

24.) Evaluate the expression $\left(x^{\frac{2}{3}}y^{\frac{3}{5}}z^{\frac{4}{7}}\right)^3$
using only positive exponents.