Molly Dickinson

Effi

!

11/20/14

Semester Exam Problems

Problems for Exam

1. Easy. Section 1.2. Order of Operations.

 Evaluate the following expression for the given variable:

 $20z+5; z =-2$

1. Medium. Section 1.7. Absolute Value Inequalities.

 Solve for x:

 $│-2x+3│\leq 17$

1. Medium. Section 2.3. Graphing.

 Graph the following inequality:

 $12x+8y<24$

1. Medium. Section 2.7. Graphing.

 Write an equation for the following graph in form$ y=a│x-h│+k$:

1. Hard. Section 4.5. Rationalize Denominators of Fractions.

 Circle the correct answer for the following problem:

 Simplify $\frac{5}{10-√3}$

1. $\frac{50\sqrt{15}}{97}$
2. $\frac{50+5\sqrt{3}}{97}$
3. $\frac{50+2\sqrt{3}}{100}$
4. $\frac{50+5\sqrt{3}}{-10\sqrt{3}}$
5. Medium. Section 4.7. Graphing.

 Graph the following equation and find the maximum value:

 $Y=-2(x+2)(x-4)$

1. Hard. Section 4.7. Completing the Square/ Factoring.

 Solve the following equation by completing the square:

 $x^{2}+14x-15$

1. Hard. Section 5.1. Properties of Exponents.

 Simplify the following expression and tell which properties were used:

 $\frac{\left(m^{5}n^{-3}\right)^{4}}{m^{5}n^{7}}$

1. Hard. Section 4.6. Complex Numbers.

 Write the following expression as a complex number in standard form:

 $(-2+4i)(-3-5i)$

1. Ridiculous. Section 10.2. Permutations with Repetition.

 Find the permutations of the letters in the following word:

 $Hippopotomonstrosesquipedaliophobia$ (fear of long words)