**1.1-1.4 Study Guide**

**Simplify using the order of operations:**

**Ex:** 8 + 10 ÷ 5 – 3 **Ex:** 5² – 8 · 2

 7 9

**Ex:** $\frac{16·3-4}{16-3·4}$ **Ex:** 25 – (2 + 2) · 3

 11 13

**Write the power:**

**Ex:** 6·6·6·6·6 **Ex:** 4 squared

 65 4²

**Evaluate the power:**

**Ex:** 3² **Ex:** 14 **Ex:** 24

 9 1 16

**Evaluate the expression:**

**Ex:** 7· (2*a* – 1) when *a* = 3 **Ex:** 4*c*² – 2*c* when *c* = 5

 35 90

**Ex:** 40 – $\frac{32}{x}$ when *x* = 4 **Ex:** 13 – 3*x* ÷ 5 + 9 when *x* = 5

 32 19

**Translate the verbal phrase into an algebraic expression**

**Ex:** The product of 11 and a number *x*

 11*x*

**Ex:** The quotient of a number *b* and 15

 $\frac{b}{15}$

**Ex:** Twice the sum of a number and 2

 2(*x* + 2)

**Find the unit rate:**

**Ex:** $75 for 5 video games **Ex:** 32 pencils in 8 boxes

 $15 per game 4 pencils per box

**Translate the verbal phrase into an equation or inequality**

**Ex:** The difference of a number *c* and 17 is greater than 33

 *c* – 17 > 33

**Ex:** The sum of 14 and twice a number *x* is 21

 14 + 2*x* = 21

**Check whether the given number is a solution to the equation or inequality. Show your work.**

**Ex:** 6*x* + 7 = 25; *x* = 3 **Ex:** $\frac{m}{3}+30<33$ ; *m* = 9

 25 = 25 YES 33 < 33 NO

**Ex:** 6*a* + 9 > 21; *a* = 2

 21 > 21 YES