***Pre-Calculus 11***

***Unit 7: Rational Expressions and Equations***

***Worksheet 7.2—Multiplying and Dividing Rational Expressions***

1. Simplify the following expressions.

a) b) c)

d) e) f)

2. Simplify the following expressions.

a) b) c)

d) e) f)

3. Simplify the following expressions. State the non-permissible values

a) b) c)

d) e) f)

4. Simplify the following expressions.

a) b) c)

d) e) f)

5. Simplify the following expressions.

1. b) c)

d) e) f)

6. Simplify the following expressions.

1. b)

c) d)

e) f)

7. Simplify the following expressions.

1. b) c) d)

8. Suppose and. Write each expression in terms of and, and simplify.

1. b)

9. Two points on a coordinate grid are represented by and .

a) What is a simplified rational expression for the slope of the line passing through *M* and *N*?

b) Write a rational expression for the slope of any line that is perpendicular to *MN*.

10. Consider as shown.

A

c

b

C a B

1. What is an expression for tan B?
2. What is an expression for ? Use your knowledge of rational expressions to help you write the answer in simplest form.
3. How do your expressions for and compare? What can you conclude from this exercise?

***Solutions***

1. a) b) c) d) e) f)

2. a) b) c) d) e) f)

3. a)

b)

c)

d)

e)

f)

4. a) b) c) d) e) f)

5. a) b) c) d) e) f)

6. a) b) c) d) e) f)

7. a) b) c) d)

8. a) b)

9. a) m= b)

10. a) b) c)