

Secondary II Review Assignment #1 NOTES FOR STUDENT

**Essential Question:**

How do I combine like terms? Add and multiply fractions and use the order of operations? (Review)

**Terminology**

Like terms

Evaluate

look alike

$x, 2x$     $x^2, 5x^2$

Simplify

Solve

**Simplify by Combining Like Terms.**

1.  $8m + 5m - 6 + m$   
 $= 14m - 6$

2.  $9x - 4xy + 3x$   
 $= 12x - 4xy$

3.  $5x - 4y + 9x - 3y$   
 $14x - 7y$

**Add or subtract. Write each answer in the simplest form (as a fraction).**

4.  $\frac{1}{4} + \frac{6}{4} = \frac{7}{4}$

5.  $\frac{3}{8} - \frac{1}{4} \cdot \left(\frac{2}{2}\right)$

$\frac{3}{8} - \frac{2}{8} = \frac{1}{8}$

$\left(\frac{6 \cdot 3}{3}\right) \cdot \frac{9}{4} - \frac{1}{6} \cdot \left(\frac{2}{2}\right)$   
 $2 \times 4 = 8$     $6 \times 2 = 12$   
 $3 \times 4 = 12$     $4 \times 4 = 16$   
 $\frac{27}{12} - \frac{6}{12} = \frac{21}{12}$

**Multiply or divide. Write each answer in the simplest form.**

Never cross multiply

7.  $\frac{7}{3} \cdot \frac{2}{5} = \frac{14}{15}$

8.  $\frac{6}{7} \cdot \frac{5}{3} = \frac{30}{21} \div \frac{3}{3} = \frac{10}{7}$

9.  $\frac{5}{8} \cdot \frac{4}{9} = \frac{20}{72}$

$\frac{5}{8} \cdot \frac{4}{9} = \frac{20}{72}$

$\frac{20}{72} \div \frac{2}{2} = \frac{10}{36} \div \frac{2}{2} = \frac{5}{18}$

**Order of Operations**

Parens = parentheses  
 Exponents  
 M y multiply  
 D ivide  
 A dd  
 S ily

parenthesis and square roots  
 exponents  
 multiply } from left to right in the same step  
 divide }  
 add }  
 subtract } from left to right in the same step

**Simplify.** (Show your work vertically)

10.  $(-5)^2$   
 $(-5)(-5)$   
 $= 25$

11.  $-(5)^2$   
 $-5 \cdot 5$   
 $= -25$

12.  $24 \div 4 \cdot 2$   
 $\downarrow$   
 $6 \cdot 2$   
 $= 12$

13.  $8 + 2(3+7)^2$   
 $8 + 2(10)^2$   
 $8 + 2(100)$   
 $8 + 200$   
 $A + S$

14.  $6 + 4(2-5)^2$   
 $6 + 4(-3)^2$  or  $6 + 4(-3 \cdot -3)$   
 $6 + 4(9)$   
 $6 + 36$   
 $A + S = 42$

15.  $18 + 3(\sqrt{32+4})$   
 $18 + 3(\sqrt{36})$   
 $18 + 3(6)$   
 $18 + 18$   
 $A = 18$

**Summary:** Square roots are in parenthesis  
 AD or Subtract fractions - find a common denominator