Class Name : **MATH 1050/1051 Fall 2018**

Instructor Name : **Nguyen**

Student Name : _____

Instructor Note :

1. Factor the following expression.

$$10\,u\,x^3\,y^2 - 24\,u^8\,x^6$$

2. Simplify.

$$\left(\frac{3\,u\,v^3}{w^{-1}}\right)^{-3}\left(v^{-2}\,w^4\right)$$

Write your answer using only positive exponents.

3. Factor:

$$3x^2 + 14xy - 24y^2$$

4. Divide.

$$\frac{x+3}{x^2-2x-3} \div \frac{3x+9}{x^2-5x+6}$$

Simplify your answer as much as possible.

5. Simplify.

$$\frac{\frac{1}{v}+2}{\frac{1}{v}-7}$$

6. Simplify.

$$\frac{1-\frac{3}{x+6}}{x+\frac{9}{x+6}}$$

7. Simplify.

$$\frac{1-\frac{49}{x^2}}{1+\frac{7}{x}}$$

8. Simplify. Write your answers without exponents.

$$\left(\frac{1}{16}\right)^{-\frac{3}{2}} = \square$$

$$4^{-\frac{3}{2}} = \square$$

9. Write the following expression in simplified radical form.

$$\sqrt[4]{81t^{10}w^6}$$

Assume that all of the variables in the expression represent positive real numbers.

10. Solve for v.

$$6(v+5) = -2(2v-6) + 2v$$

Simplify your answer as much as possible.

11. For each equation, choose the statement that describes its solution.
If applicable, give the solution.

$6(v-2)+1=2(3v-5)$
○ No solution
○ $v=$
○ All real numbers are solutions

$4(u+1)+u=3(u-2)+2$
○ No solution
○ $u=$
○ All real numbers are solutions

12. Solve for u .

$$2u^2-u+10=(u+2)^2$$

If there is more than one solution, separate them with commas.

Obj. 3 #5 Answers for class MATH 1050/1051 Fall 2018

1. $2ux^3(5y^2-12u^7x^3)$

2. $\dfrac{w}{27u^3v^{11}}$

3. $(3x-4y)(x+6y)$

4. $\dfrac{x-2}{3(x+1)}$

5. $\dfrac{1+2v}{1-7v}$

6. $\dfrac{1}{x+3}$

7. $\dfrac{x-7}{x}$

8.

$\left(\dfrac{1}{16}\right)^{-\frac{3}{2}}=64$

$4^{-\frac{3}{2}}=\dfrac{1}{8}$

9. $3t^2w\sqrt[4]{t^2w^2}$

10. $v = -\frac{9}{4}$

11.

$6(v-2)+1=2(3v-5)$
◉ No solution
○ v =
○ All real numbers are solutions

$4(u+1)+u=3(u-2)+2$
○ No solution
◉ u = -4
○ All real numbers are solutions

12. $u = 2,\ 3$