

# ALEKS<sup>®</sup> Test 1 #1

College Algebra with Trigonometry / Math 005 201608 - 09 (Prof. Sitaraman)

Student Name/ID:

1. Simplify.

$$(-xy^2z^2)^3(2xy^3)$$

2. Multiply.

$$(4u^2 + 3u + 4)(5u^2 - u - 2)$$

Simplify your answer.

3. Evaluate.

$$8^{\frac{1}{3}} = \underline{\hspace{2cm}}$$

$$16^{\frac{1}{4}} = \underline{\hspace{2cm}}$$

4. Simplify.

$$\frac{\frac{x-5}{4x}}{\frac{x+5}{3x^4}}$$

5. Rationalize the denominator and simplify.

$$\frac{-4}{7 + 3\sqrt{2}}$$

6. Simplify.

$$\frac{\frac{u-4}{u}}{\frac{u^2 - 8u + 16}{2u}}$$

7. Subtract.

$$\frac{6}{x} - \frac{5}{x+1}$$

Simplify your answer as much as possible.

8. Factor by grouping.

$$y^3 + 4y^2 - 3y - 12$$

# Test 1 #1 Answers for class Math 005 201608 - 09

1.  $-2x^4y^9z^6$

2.  $20u^4 + 11u^3 + 9u^2 - 10u - 8$

3.

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

$$16^{\frac{1}{4}} = 2$$

4.  $\frac{3x^3(x-5)}{4(x+5)}$

5.  $\frac{-28 + 12\sqrt{2}}{31}$

6.  $\frac{2}{u-4}$

7.  $\frac{x+6}{x(x+1)}$

8.  $(y+4)(y^2-3)$