# <u>ALEKS®</u>

#### Class Name : Lacoste College Algebra Fall 2019

Student Name : \_\_\_\_\_

Instructor Name : Master Templates

Instructor Note : All practice problems for Exam 1. There are multiple versions so that you can try challenging problems more than once.

#### Question 1 of 38

Rewrite the expression by factoring out (x + 5).

$$2x^2(x+5) - 5(x+5)$$

# Question 2 of 38

Factor by grouping.

$$4y^3 + 5y^2 - 28y - 35$$

# Question 3 of 38

Factor by grouping.

$$16 u - uy + 2y - 8u^2$$

#### Question 4 of 38

Factor.

$$y^2 + y - 20$$

#### Question 5 of 38

Factor.

$$x^2 - xy - 20y^2$$

# Question 6 of 38

Factor completely.

$$2y^2 - 34y + 60$$

#### Question 7 of 38

Factor.

$$7_z^2 - 13_z - 2$$

# Question 8 of 38

Factor.

$$2y^2 + 13y + 20$$

#### Question 9 of 38

Factor.

$$9_z^2 + 24_z - 20$$

#### Question 10 of 38

Factor.

$$5x^2 + 27xy + 10y^2$$

#### Question 11 of 38

Factor completely.

$$-7u^{2}+18u-8$$

# Question 12 of 38

Factor.

$$w^2 + 8w + 16$$

#### Question 13 of 38

Factor.

$$4y^2 - 20y + 25$$

#### Question 14 of 38

Factor.

$$9u^2 - 48ux + 64x^2$$

# Question 15 of 38

Factor.

$$9-49x^{2}$$

#### Question 16 of 38

Factor.

$$9x^2 - 4y^2$$

# Question 17 of 38

Factor completely.

$$12y - 75y^3$$

# Question 18 of 38

Factor completely.

$$48x^2y^2 - 3y^4$$

#### Question 19 of 38

Factor completely.

$$15x^4 + 39x^3 + 18x^2$$

# Question 20 of 38

Factor completely:

$$2u^2y^4-2u^2.$$

# Question 21 of 38

Factor.

$$27 - 8x^3$$

# Question 22 of 38

Simplify.

$$\sqrt{8}$$

#### Question 23 of 38

Simplify.



# Question 24 of 38

Simplify.

 $5\sqrt{13} + 8\sqrt{13}$ 

#### Question 25 of 38

Simplify.

$$4\sqrt{50} + \sqrt{18}$$

#### Question 26 of 38

Simplify.

$$\sqrt{75} w - \sqrt{27} w$$

Assume that the variable represents a positive real number.

#### Question 27 of 38

Simplify.

$$\sqrt{2} \cdot \sqrt{3}$$

#### Question 28 of 38

Simplify.

$$\sqrt{2} \cdot \sqrt{6}$$

#### Question 29 of 38

Write in terms of i. Simplify your answer as much as possible.



#### Question 30 of 38

Solve.

$$(8+_W)(3_W+2)=0$$

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

#### Question 31 of 38

Solve for u.

$$6u^2 + 18u = 0$$

#### Question 32 of 38

Solve for y.

$$y^2 + 9y + 18 = 0$$

#### Question 33 of 38

Solve for W.

$$2w^2 - 2 = 3w$$

#### Question 34 of 38

Solve for u .

$$(u-1)^2 = 2u^2 - 3u - 1$$

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

#### Question 35 of 38

Solve  $\chi^2 = 45$ , where  $\chi$  is a real number. Simplify your answer as much as possible.

#### Question 36 of 38

Solve  $(x+3)^2 - 24 = 0$ , where x is a real number. Simplify your answer as much as possible.

# Question 37 of 38

Use the quadratic formula to solve for  $\chi$ .

$$4x^2 - 9x - 1 = 0$$

#### Question 38 of 38

Find all complex solutions of  $x^2 - 5x + 7 = 0$ .

# Exam 1 Practice Problems #1 Answers for class Lacoste College Algebra Fall 2019

#### Question 1 of 38

 $(x+5)\left(2x^2-5\right)$ 

# Question 2 of 38

 $(4y+5)(y^2-7)$ 

# Question 3 of 38

(8u+y)(2-u)

# Question 4 of 38

(y-4)(y+5)

#### Question 5 of 38

(x+4y)(x-5y)

# Question 6 of 38

2(y-2)(y-15)

# Question 7 of 38

(z-2)(7z+1)

# Question 8 of 38

(y+4)(2y+5)

# Question 9 of 38

 $(3_z - 2)(3_z + 10)$ 

# Question 10 of 38

 $(5_x+2_y)(x+5_y)$ 

#### Question 11 of 38

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$$-(u-2)(7u-4)$$

#### Question 12 of 38

$$(w+4)^2$$

# Question 13 of 38

 $(2y-5)^2$ 

#### Question 14 of 38

 $\left(3_{u}-8_{x}\right)^{2}$ 

# Question 15 of 38

 $(3+7_x)(3-7_x)$ 

# Question 16 of 38

 $(3_x+2_y)(3_x-2_y)$ 

# Question 17 of 38

 $3_y(2+5_y)(2-5_y)$ 

# Question 18 of 38

 $3y^2(4x+y)(4x-y)$ 

# Question 19 of 38

 $3x^2(x+2)(5x+3)$ 

#### Question 20 of 38

$$2u^{2}(y-1)(y+1)(y^{2}+1)$$

#### Question 21 of 38

$$(3-2_x)(9+6_x+4_x^2)$$

# Question 22 of 38

 $2\sqrt{2}$ 

#### Question 23 of 38

 $3\sqrt{17}$ 

# Question 24 of 38

 $13\sqrt{13}$ 

#### Question 25 of 38

 $23\sqrt{2}$ .

#### Question 26 of 38

 $2\sqrt{3_W}$ 

# Question 27 of 38

$$\sqrt{6}$$

# Question 28 of 38

 $2\sqrt{3}$ 

# Question 29 of 38

 $2i\sqrt{7}$ 

#### Question 30 of 38

 $w = -8, -\frac{2}{3}$ 

#### Question 31 of 38

u = 0, -3

#### Question 32 of 38

y = -3, -6

#### Question 33 of 38

$$-\frac{1}{2}, 2$$

#### Question 34 of 38

u = -1, 2

#### Question 35 of 38

 $x = 3\sqrt{5}, \ -3\sqrt{5}$ 

#### Question 36 of 38

$$x = -3 + 2\sqrt{6}, \ -3 - 2\sqrt{6}$$

#### Question 37 of 38

$$\frac{9+\sqrt{97}}{8}, \frac{9-\sqrt{97}}{8}$$

#### Question 38 of 38

$$x = \frac{5}{2} + \frac{\sqrt{3}}{2}i, \frac{5}{2} - \frac{\sqrt{3}}{2}i$$