

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

Instructor Name : **Master Templates**

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

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  $(w + 4)$ .

$$2w^2(w + 4) - 5(w + 4)$$

### Question 2 of 38

Factor by grouping.

$$4w^3 + 7w^2 - 20w - 35$$

### Question 3 of 38

Factor by grouping.

$$2y - 3x^2 - xy + 6x$$

### Question 4 of 38

Factor.

$$x^2 - 9x + 18$$

### Question 5 of 38

Factor.

$$x^2 + 8xy - 20y^2$$

**Question 6 of 38**

Factor completely.

$$2x^2 + 2x - 60$$

**Question 7 of 38**

Factor.

$$2z^2 - 11z + 5$$

**Question 8 of 38**

Factor.

$$21z^2 + z - 2$$

**Question 9 of 38**

Factor.

$$9z^2 + 18z - 16$$

**Question 10 of 38**

Factor.

$$4x^2 - 15xy + 14y^2$$

**Question 11 of 38**

Factor completely.

$$-2x^2 - 3x + 14$$

**Question 12 of 38**

Factor.

$$w^2 + 14w + 49$$

**Question 13 of 38**

Factor.

$$25w^2 + 60w + 36$$

**Question 14 of 38**

Factor.

$$16w^2 - 24wu + 9u^2$$

**Question 15 of 38**

Factor.

$$49 - 36w^2$$

**Question 16 of 38**

Factor.

$$81u^2 - 64v^2$$

**Question 17 of 38**

Factor completely.

$$27y^2 - 75y^4$$

**Question 18 of 38**

Factor completely.

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

**Question 19 of 38**

Factor completely.

$$8u^7 + 12u^6 - 20u^5$$

**Question 20 of 38**

Factor completely:

$$32w^4 - 2v^4w^4.$$

**Question 21 of 38**

Factor.

$$8w^3 - 27$$

**Question 22 of 38**

Simplify.

$$\sqrt{24}$$

**Question 23 of 38**

Simplify.

$$\sqrt{189}$$

**Question 24 of 38**

Simplify.

$$8\sqrt{7} - 5\sqrt{7}$$

**Question 25 of 38**

Simplify.

$$-\sqrt{27} + 2\sqrt{12}$$

**Question 26 of 38**

Simplify.

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

Assume that the variable represents a positive real number.

**Question 27 of 38**

Simplify.

$$\sqrt{5} \cdot \sqrt{3}$$

**Question 28 of 38**

Simplify.

$$\sqrt{12} \cdot \sqrt{6}$$

**Question 29 of 38**

Write in terms of  $i$ .

Simplify your answer as much as possible.

$$\sqrt{-80}$$

**Question 30 of 38**

Solve.

$$(7 + v)(4v - 6) = 0$$

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

**Question 31 of 38**

Solve for  $w$ .

$$4w^2 - 24w = 0$$

**Question 32 of 38**

Solve for  $v$ .

$$v^2 + 3v - 18 = 0$$

**Question 33 of 38**

Solve for  $x$ .

$$5x^2 + 5 = -26x$$

**Question 34 of 38**

Solve for  $v$ .

$$2v^2 + 9v + 8 = (v + 6)^2$$

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

**Question 35 of 38**

Solve  $x^2 = 27$ , where  $x$  is a real number.  
Simplify your answer as much as possible.

**Question 36 of 38**

Solve  $(y - 10)^2 - 54 = 0$ , where  $y$  is a real number.  
Simplify your answer as much as possible.

**Question 37 of 38**

Use the quadratic formula to solve for  $x$ .

$$2x^2 - 5x - 4 = 0$$

**Question 38 of 38**

Find all complex solutions of  $2x^2 + 3x + 5 = 0$ .

# Exam 1 Practice Problems #2 Answers for class Lacoste

## College Algebra Fall 2019

### Question 1 of 38

$$(w + 4)(2w^2 - 5)$$

### Question 2 of 38

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

### Question 3 of 38

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

### Question 4 of 38

$$(x - 3)(x - 6)$$

### Question 5 of 38

$$(x - 2y)(x + 10y)$$

### Question 6 of 38

$$2(x - 5)(x + 6)$$

### Question 7 of 38

$$(z - 5)(2z - 1)$$

### Question 8 of 38

$$(3z + 1)(7z - 2)$$

### Question 9 of 38

$$(3z - 2)(3z + 8)$$

### Question 10 of 38

$$(4x - 7y)(x - 2y)$$

### Question 11 of 38



$$-(x-2)(2x+7)$$

**Question 12 of 38**

$$(w+7)^2$$

**Question 13 of 38**

$$(5w+6)^2$$

**Question 14 of 38**

$$(4w-3u)^2$$

**Question 15 of 38**

$$(7+6w)(7-6w)$$

**Question 16 of 38**

$$(9u+8v)(9u-8v)$$

**Question 17 of 38**

$$3y^2(3+5y)(3-5y)$$

**Question 18 of 38**

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

**Question 19 of 38**

$$4u^5(u-1)(2u+5)$$

**Question 20 of 38**

$$2w^4(2-v)(2+v)(4+v^2)$$

**Question 21 of 38**

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

**Question 22 of 38**

$$2\sqrt{6}$$

**Question 23 of 38**

$$3\sqrt{21}$$

**Question 24 of 38**

$$3\sqrt{7}$$

**Question 25 of 38**

$$\sqrt{3}.$$

**Question 26 of 38**

$$2\sqrt{3z}$$

**Question 27 of 38**

$$\sqrt{15}$$

**Question 28 of 38**

$$6\sqrt{2}$$

**Question 29 of 38**

$$4i\sqrt{5}$$

**Question 30 of 38**

$$v = -7, \frac{3}{2}$$

**Question 31 of 38**

$$w = 0, 6$$

**Question 32 of 38**

$$v = 3, -6$$

**Question 33 of 38**

$$-\frac{1}{5}, -5$$

**Question 34 of 38**

$$v = 7, -4$$

**Question 35 of 38**

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

**Question 36 of 38**

$$y = 10 + 3\sqrt{6}, 10 - 3\sqrt{6}$$

**Question 37 of 38**

$$\frac{5 + \sqrt{57}}{4}, \frac{5 - \sqrt{57}}{4}.$$

**Question 38 of 38**

$$x = -\frac{3}{4} + \frac{\sqrt{31}}{4}i, -\frac{3}{4} - \frac{\sqrt{31}}{4}i$$