

Ottocento Lesson #4 Factoring Worksheet

Video Solutions at: <https://youtu.be/0xUyilm9EO8>

Question 1

What are the solutions to the given equation?

$$x^2 + x - 56 = 0$$

Question 2

What are the solutions to the given equation?

$$5x^4 - 45x^3 + 70x^2 = 0$$



Question 3

Which of the following expressions is(are) a factor of $3x^2 - 17x + 20$?

- I. $3x - 5$
- II. $x + 4$

- A) I only
- B) II only
- C) I and II
- D) Neither I nor II

Question 4

Which expression is equivalent to $8x^3y^9 - 30y^2$?

- A) $4y^2(2x^3y^7)$
- B) $4y^9(2xy^3)$
- C) $2y^2(4x^3y^7 - 15)$
- D) $2y^2(4x^3y^7 - 30)$



Question 5

One of the factors of $6x^3 - 3x^2 - 3x$ is $(ax + b)$. What is the value of $a + 5b$?

Question 6

Factor completely:

$$7x^2 - 63$$

Question 7

Factor completely:

$$x^8 - 10x^4y^2 + 25y^4$$



Question 8

Factor completely:

$$x^{18} + 8x^9 - 48$$

Question 9

Factor completely:

$$256x^4 - 625y^4$$



Question 10

Which of the following is equivalent to the expression $x^4 - 18x^2 + 81$?

- I. $(x + 3)^2(x - 3)^2$
- II. $(x^2 - 9)^2$

- A) I only
- B) II only
- C) I and II
- D) Neither I nor II