

Math 0995 CBE 3 Review

UtahStateUniversity®

Problem 1

- Simplify the expression:

$$\frac{-9x + 9y}{x - y}$$

Solution: -9

Problem 2

- Simplify the expression:

$$\frac{6m^3 + m}{m}$$

Solution: $6m^2 + 1$

Problem 3

- Multiply and simplify the expression:

$$\frac{8x + 80}{16} \cdot \frac{6}{30x}$$

Solution: $\frac{x+10}{10x}$

Problem 4

- Simplify the expression and leave in factored form:

$$\frac{5x^2 + 25x + 30}{5x - 20} \div \frac{x^2 + x - 6}{x + 4}$$

Simplify the expression and leave in factored form: $\frac{5x^2+25x+30}{5x-20} \div \frac{x^2+x-6}{x+4}$

Solution: $\frac{(x+2)(x+4)}{(x-4)(x-2)}$

Problem 5

- Perform the indicated operation:

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

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

Solution: $\frac{2}{x-1}$

Problem 6

- Perform the indicated operation and leave the denominator in factored form:

$$\frac{1}{x^2 - 13x + 40} - \frac{8}{x - 8}$$

$$\frac{1}{x^2 - 13x + 40} - \frac{8}{x - 8}$$

Solution: $\frac{-8x+41}{(x-8)(x-5)}$

Problem 7

- Simplify the expression:

$$-(10000)^{3/4}$$

Solution: -1000

Problem 8

- Simplify:

$$\sqrt[3]{320x^{11}y^{16}}$$

$$\text{Solution: } 4x^3y^5\sqrt[3]{5x^2y}$$

Problem 9

- Simplify:

$$\sqrt{162} - \sqrt{18}$$

Solution: $6\sqrt{2}$

Problem 10

- Multiply and simplify:

$$(4\sqrt{x} - 6)(3\sqrt{x} - 1)$$

Solution: $12x - 22\sqrt{x} + 6$

Other Resources

Aggie Math Learning Center

- Visit usu.edu/math/amlc for more videos, resources, tutoring times, and recitation leader office hours