WRITE ALL ANSWERS ON ANSWER LINE

MAT1033 - Intermediate Algebra - TEST 3
Mr. Foley

Name_____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Express the radical in simplified form.

1) $\sqrt[3]{-64}$ 1) _____

2) $\sqrt{-500}$ 2) _____

Add or subtract as indicated. Write the answer in lowest terms.

3) $\frac{1}{x - 6} - \frac{7}{6 - x}$ 3) _____

4) $\frac{x}{x^2 - 16} - \frac{8}{x^2 + 5x + 4}$ 4) _____

5) $\frac{3}{y^2 - 3y + 2} + \frac{7}{y^2 - 1}$ 5) _____

6) $\frac{3}{10x} + \frac{9}{14x^2}$ 6) _____

Find the root if it is a real number.

7) $-\sqrt[3]{-64}$ 7) _____

8) $\sqrt[4]{\frac{81}{256}}$ 8) _____

9) $\sqrt[4]{625}$ 9) _____

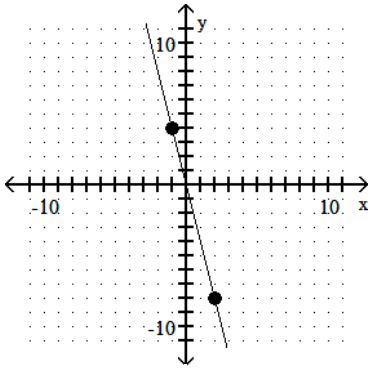
Simplify the complex fraction.

10) $\dfrac{\frac{4}{3r-1} - 4}{\frac{4}{3r-1} + 4}$ 10) _____

11) $\dfrac{9 + \frac{3}{x}}{\frac{x}{4} + \frac{1}{12}}$ 11) _____

Use the coordinates of the indicated points to find the ratio of rise to run for the line.

12) 12) _____



Simplify the expression involving rational exponents.

13) $(-27)^{1/3}$ 13) _____

14) $8^{-1/3}$ 14) _____

15) $-\left(\frac{25}{36}\right)^{1/2}$ 15) _____

Use the rules of exponents to simplify the expression. Write the answer with positive exponents. Assume that all variables represent positive real numbers.

16) $\frac{x^{3/5}}{x^{6/5} \cdot x^{-5}}$ 16) _____

17) $\left(16\frac{a^2b^{-4}}{a^{-2}b^4}\right)^{1/4}$ 17) _____

Find an equation of the line passing through the two points. Write the equation in standard form.

18) (-8, 0) and (-3, 4) 18) _____

Express the radical in simplified form. Assume that all variables represent positive real numbers.

19) $-\sqrt[3]{1000x^4y^5}$ 19) _____

20) $\sqrt[3]{\frac{y^{11}}{64}}$ 20) _____

21) $\sqrt{384x^2}$ 21) _____

Write the rational expression in lowest terms.

22) $\frac{(y - 1)(y - 4)}{(4 - y)(1 + y)}$ 22) _____

Perform the indicated operation and express in lowest terms.

23) $\frac{3x + 8}{x^2 - 2x - 8} - \frac{x + 4}{x^2 - 2x - 8}$ 23) _____

Simplify the expression. If any variables are present, assume that they are positive.

24) $\sqrt[3]{8x^3} \cdot \sqrt[3]{64x^3}$ 24) _____

Find all solutions by factoring.

25) $11m^2 - 9m = 0$ 25) _____

1) -4
2) Not a real number
3) $\frac{8}{x - 6}$
4) $\frac{x^2 - 7x + 32}{(x - 4)(x + 4)(x + 1)}$
5) $\frac{10y - 11}{(y - 1)(y + 1)(y - 2)}$
6) $\frac{3(7x + 15)}{70x^2}$
7) 4
8) $\frac{3}{4}$
9) 5
10) $\frac{2 - 3r}{3r}$
11) $\frac{36}{x}$
12) -4
13) -3
14) $\frac{1}{2}$
15) $-\frac{5}{6}$
16) $x^{22/5}$
17) $\frac{2a}{b^2}$
18) $4x - 5y = -32$
19) $-10xy\sqrt[3]{xy^2}$
20) $\frac{y^3\sqrt[3]{y^2}}{4}$
21) $8x\sqrt{6}$
22) $\frac{1 - y}{1 + y}$
23) $\frac{2}{x - 4}$
24) $8x^2$
25) $\left\{\frac{9}{11}, 0\right\}$