

MAT 055 Practice Test Chapter 14

All test answers are to be in simplest form. A calculator may be used.

Cell phones, iPads, and other electronic devices with scanning or photo ability may NOT be used.

No notes, no books, no homework may be used while taking this test.

If possible, evaluate the expression at the given value of the variable.

1) $\frac{5x^2 + 8x}{3x}, x = -3$

2) $\frac{x}{x+6}, x = -6$

Find any values of the variable that make the expression undefined.

3) $\frac{8}{r+4}$

4) $\frac{m-8}{4}$

5) $\frac{x^2 - 16}{x^2 + 17x + 72}$

Write the expression in lowest terms.

6) $\frac{4x+2}{20x^2+18x+4}$

7) $\frac{y^2+8y+16}{y^2+11y+28}$

8) $\frac{a^2-49}{a^2+10a+21}$

9) $\frac{7-m}{m-7}$

10) $\frac{m^2-s^2}{s-m}$

Simplify. Write your answer in lowest terms and leave the answer in factored form.

11) $\frac{4p-4}{p} \cdot \frac{7p^2}{9p-9}$

12) $\frac{k^2+15k+56}{k^2+16k+64} \cdot \frac{k^2+8k}{k^2+13k+42}$

13) $\frac{z^2-9}{z} \div \frac{z+3}{z-8}$

14) $\frac{y^3-3y}{y^2-9} \div \frac{y^2+4y+4}{y^2+5y+6}$

15) $\frac{2m}{m-6} - \frac{12}{m-6}$

16) $\frac{5x}{x+4} + \frac{7x-8}{x+4} - \frac{4x}{x+4}$

17) $\frac{12}{x} + \frac{7}{4x}$

18) $\frac{8}{(x+5)^2} + \frac{6}{x+5}$

19) $\frac{2}{15x} - \frac{4}{21x^2}$

20) $\frac{4x}{x^2-5x+6} - \frac{16}{x^2-6x+8}$

Simplify the complex fraction.

$$21) \frac{\frac{x^8}{7y^7}}{\frac{x^2}{y^4}}$$

$$22) \frac{\frac{x}{9}}{\frac{8}{x+3}}$$

$$23) \frac{\frac{1}{k+2}}{\frac{5}{k^2-4}}$$

$$24) \frac{\frac{2}{x} + \frac{3}{y}}{\frac{3}{x} - \frac{2}{y}}$$

$$25) \frac{\frac{4}{x^2-16} + \frac{1}{x-4}}{\frac{3}{x^2-16} + \frac{5}{x+4}}$$

Solve the equation.

$$26) \frac{x}{4} = \frac{7}{8}$$

$$27) \frac{x}{4} = \frac{7x}{8}$$

$$28) \frac{x+1}{2} = \frac{x+2}{3}$$

$$29) \frac{5-x}{x} - \frac{7}{x} = -\frac{3}{4}$$

$$30) \frac{4}{x-4} + \frac{1}{2x-8} = \frac{9}{2}$$

$$31) \frac{1}{x-6} + \frac{8}{x} = \frac{-48}{x^2-6x}$$

$$32) \frac{x}{2x+2} = \frac{-2x}{4x+4} + \frac{2x-3}{x+1}$$