

Regents Review #5: Algebraic Fractions

Multiple Choice

- _____ 1. For which value of x is the expression $\frac{6-x}{x+2}$ undefined? {Jan '08}
- a. 2
b. 0
c. -2
d. 6
- _____ 2. Which value of n makes the expression $\frac{5n}{2n-1}$ undefined? {Jun '09}
- a. $\frac{-1}{2}$
b. 0
c. $\frac{1}{2}$
d. 1
- _____ 3. The function $y = \frac{x}{x^2-9}$ is undefined when the value of x is {Jan '09}
- a. -3, only
b. 3 or -3
c. 0 or 3
d. 3, only
- _____ 4. Which expression represents $\frac{25x-125}{x^2-25}$ in simplest form? {Aug '08}
- a. $\frac{-5}{x}$
b. $\frac{25}{x-5}$
c. $\frac{5}{x}$
d. $\frac{25}{x+5}$

_____ 5. Which expression represents $\frac{x^2 - 2x - 15}{x^2 + 3x}$ in simplest form? {Jun '09}

a. -5

c. $\frac{-2x - 15}{3x}$

b. $\frac{x - 5}{x}$

d. $\frac{-2x - 5}{x}$

_____ 6. What is the product of $\frac{x^2 - 1}{x + 1}$ and $\frac{x + 3}{3x - 3}$ expressed in simplest form? {Jun '08}

a. $\frac{x}{3}$

c. x

b. $\frac{x + 3}{3}$

d. x + 3

_____ 7. What is the sum of $\frac{3}{2x}$ and $\frac{4}{3x}$ expressed in simplest form? {Aug '09}

a. $\frac{17}{6x}$

c. $\frac{12}{6x^2}$

b. $\frac{7}{5x}$

d. $\frac{17}{12x}$

___ 8. What is $\frac{6}{5x} - \frac{2}{3x}$ expressed in simplest form? {Jun '09}

a. $\frac{4}{2x}$

c. $\frac{4}{15x}$

b. $\frac{8}{15x}$

d. $\frac{8}{15x^2}$

___ 9. What is the solution of $\frac{k+4}{2} = \frac{k+9}{3}$? {Jan '09}

a. 14

c. 6

b. 1

d. 5

___ 10. What is the value of x in the equation $\frac{2}{x} - 3 = \frac{26}{x}$? {Jan '09}

a. $\frac{-1}{8}$

c. 8

b. -8

d. $\frac{1}{8}$

Short Answer: 2pts

11. Find the value(s) of x that make the expression $\frac{x^2 - 9}{x^2 + 7x + 10}$ undefined? {Aug '09}

12. Express in simplest form: $\frac{x^2 - 5x - 24}{x^2 - 8x}$ {Jun '08}

Short Answer : 3pts

13. Express in simplest form: {Aug '09}

$$\frac{2x^2 - 8x - 42}{6x^2} \div \frac{x^2 - 9}{x^2 - 3x}$$

14. Perform the indicated operations and express in simplest form: {Jan '09}

$$\frac{3x^2 + 12x - 15}{x^2 + 2x - 15} \div \frac{3x^2 - 3x}{3x - x^2}$$

Short Answer: 4pts

15. Solve for x: $\frac{x+1}{x} = \frac{-7}{x-12}$? {Aug '07}

16. Solve algebraically for x: $\frac{2x}{5} + \frac{1}{3} = \frac{7x-2}{15}$ {Aug '08}