

Review Activity Answer Key (Yesterday's)

1. $\frac{2}{3}, x \neq 0, -5$

2. $-(x-4)$ or $-x+4$

3. $\frac{(x+1)}{(x+4)}$

4. $\frac{-2x^2+3x+6}{(x-9)(x+2)}$

5. $\frac{2x^2+7x+4}{(x-4)(x+3)}$

6. x^2+3

7. $\{8\}$

8. $\{ \}$ or $\emptyset$

9. $\frac{(x)(x+5)}{(x+4)}, x \neq \pm 4$
b) also $x \neq 0$

(Work in yesterday's file)

Aug 11-3:57 PM

2-7 (Review) HW Answer Key

1. $\frac{x}{(x-2)}, x \neq 2$

2. $\frac{8x}{(x-2)}, x \neq 0, 2$

3. $\frac{x}{(x-2)}, x \neq 1, 2$

4. $\frac{(x+2)}{(x)(x+1)}$

5. $\frac{-1}{(2x+1)}$

6. $\frac{(x+7)}{(x-2)}$

7. -2

8. $\frac{(2x-5)}{x}$

9. 4

10. $\frac{4x+3}{(x)(x-3)}$

11. $\frac{1}{(y+3)}$

12. 3

13. $\{4\}$

14. $\{6, 3\}$

15. $\{ \}$ or $\emptyset$

16. $\{2\}$

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Alg 2 Homework 2-7 (Review)

Name Key (2016)Simplify and identify any x-values for which the expression is undefined.

1. $\frac{x}{x-2}$
 $x \neq 2$

2. $\frac{16x^2}{2x^2-4x}$
 $\frac{16x^2}{2x(x-2)} = \frac{8x}{x-2}$
 $x \neq 0, 2$

3. $\frac{4x^2-4x}{4x^2-12x+8}$
 $\frac{4x(x-1)}{(4x-8)(x-1)} = \frac{4x(x-1)}{4(x-2)(x-1)}$
 $= \frac{x}{x-2}$ $x \neq 1, 2$

Multiply or divide. Simplify if possible.

4. $\frac{x^2+2x}{x^2-6x-7} \cdot \frac{x-7}{x^2}$
 $\frac{x(x+2)}{(x-7)(x+1)} \cdot \frac{x-7}{x^2}$
 $\frac{x+2}{x(x+1)}$

5. $\frac{2x-7}{2x^2-5x-3} \cdot \frac{3x-9}{21-6x}$
 $\frac{(x-3)(2x+1)}{(x-3)(2x+1)} \cdot \frac{3(x-3)}{3(7-2x)}$
 $= \frac{-1}{2x+1}$

6. $\frac{x^2+5x+6}{x^2-2x-15} \div \frac{x^2-4}{x^2+2x-35}$
 $\frac{(x+2)(x+3)}{(x-5)(x+3)} \cdot \frac{(x+7)(x-5)}{(x+2)(x-2)}$
 $\frac{x+7}{x-2}$

7. $\frac{x^2-9}{9-3x} \div \frac{x^2+7x+12}{6x+24}$
 $\frac{(x+3)(x-3)}{3(3-x)} \cdot \frac{2(x+4)}{6(x+4)}$
 $= -2$

Add or subtract. Simplify if possible.

8. $\frac{10+5x}{5x} + \frac{x-7}{x} \left(\frac{5}{5}\right)$
 $\frac{10+5x}{5x} + \frac{5x-35}{5x}$
 $\frac{10x-25}{5x} = \frac{5(2x-5)}{5x}$
 $\frac{2x-5}{x}$

9. $\frac{4a}{a-3} + \frac{12}{3-a} \left(\frac{-1}{-1}\right)$
 $\frac{4a-12}{a-3}$
 $\frac{4(a-3)}{a-3}$
 4

10. $\frac{5}{x(x-3)} - \frac{1}{x} \left(\frac{x-3}{x-3}\right)$
 $\frac{5x}{x(x-3)} - \frac{x-3}{x(x-3)}$
 $\frac{4x+3}{x(x-3)}$

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Simplify the following complex fractions.

11. $\frac{\frac{3}{y} - 1}{\frac{y^2-3}{3} \cdot \frac{3}{y}}$
 $\frac{\frac{3-y}{y}}{\frac{y^2-3}{y}} = \frac{3-y}{y^2-3}$
 $\frac{3-y}{(y-3)(y+3)}$
 $\frac{1}{y+3}$

12. $\frac{\frac{10}{7} \cdot \frac{3a+6}{10} + \frac{6}{5} \left(\frac{10}{7}\right)}{\frac{10}{7} \cdot \frac{2}{5} \cdot \frac{a}{10} \left(\frac{10}{7}\right)}$
 $= \frac{3a+12}{4+a}$
 $= \frac{3(a+4)}{4+a} = 3$

Solve.

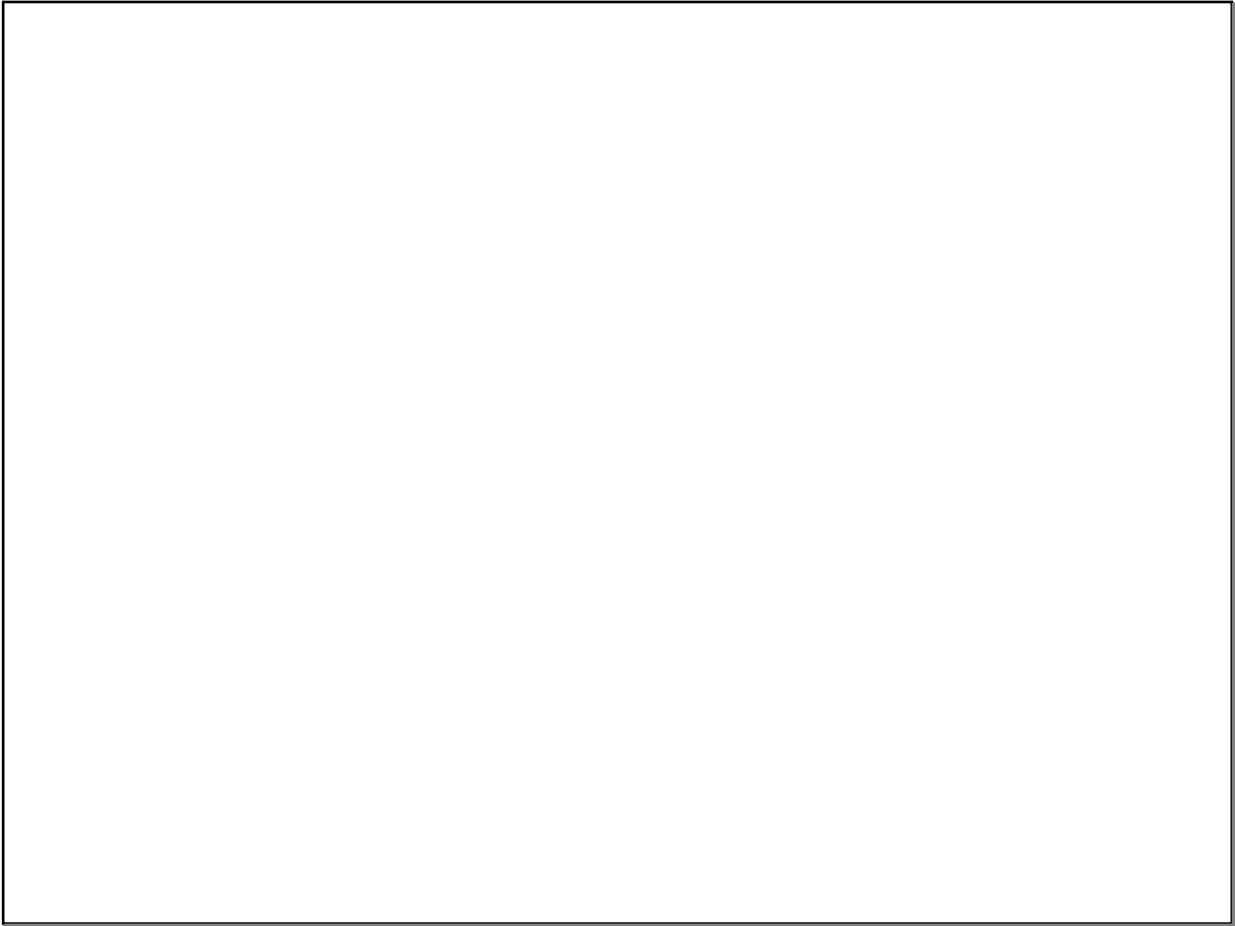
13. $\frac{7x}{3x+2} = \frac{2}{1}$
 $7x = 6x+4$
 $x = 4$
 $\{4\}$

14. $\frac{x-9}{1} = \frac{-18}{x}$ $x \neq 0$
 $x^2-9x = -18$
 $x^2-9x+18 = 0$ $\{3, 6\}$
 $(x-6)(x-3) = 0$
 $x-6=0 \quad x-3=0$
 $x=6 \quad x=3$

15. $\frac{\frac{6x}{x-3}}{\frac{x+3}{x-3} \cdot \frac{4x+6}{x-3}}$
 $\frac{6x}{x-3} = \frac{4x+6}{x-3}$
 $6x = 4x+6$
 $2x = 6$
 $x = 3$ reject
 $\{ \}$

16. $\frac{1}{x} + \frac{1}{3x} = \frac{2}{3}$ $x \neq 0$
 $\left(\frac{3x}{1}\right) \frac{1}{x} + \left(\frac{3x}{1}\right) \frac{1}{3x} = \left(\frac{3x}{1}\right) \frac{2}{3}$
 $3+1 = 2x$
 $4 = 2x$
 $2 = x$ $\{2\}$

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