

Assignment

Date _____ Period _____

7A: Simplify each expression.

1) $\frac{4x}{6x^2}$

2) $\frac{9x^2}{9x^3}$

3) $\frac{6r+6}{6}$

4) $\frac{x+2}{2x^2+4x}$

5) $\frac{3n^2-5n-2}{2n^2-2n-4}$

6) $\frac{6x+3}{6x+9}$

7B: Multiply & Simplify each expression.

7) $\frac{2a^2}{2} \cdot \frac{3}{3a}$

8) $\frac{3x}{2} \cdot \frac{2}{3}$

9) $\frac{4k^2-2k}{2k^2} \cdot \frac{2k}{4k^2-2k}$

10) $\frac{1}{n+3} \cdot \frac{n^2+6n+9}{2n}$

11) $\frac{3-2n}{5n^2} \cdot \frac{5n^2+28n+15}{10n^2-9n-9}$

12) $\frac{n-5}{5n-2} \cdot \frac{15n^2-26n+8}{3n-4}$

7C: Divide & Simplify each expression.

13) $\frac{6}{5n} \div \frac{5}{5n^3}$

14) $\frac{5v^2}{7v^3} \div \frac{4v}{6v}$

15) $\frac{x+8}{x^2-64} \div \frac{1}{x+1}$

16) $\frac{1}{x+7} \div \frac{x-5}{x^2+10x+21}$

17) $\frac{4n^2-14n+10}{2n-2} \div \frac{2n-5}{n-3}$

18) $\frac{5x+10}{25x-20} \div \frac{x+4}{4-5x}$

7D: Add or Sub W?like Denominators remember to Simplify each expression.

19) $\frac{2x+2y}{15y^2} + \frac{x+y}{15y^2}$

20) $\frac{4}{6y^3} - \frac{5x}{6y^3}$

21) $\frac{n+1}{n^2+6n+9} + \frac{n+1}{n^2+6n+9}$

22) $\frac{v+4}{8v^3+8v^2} - \frac{v-1}{8v^3+8v^2}$

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

24) $\frac{x-2}{2x^2-6x+4} - \frac{x-2}{2x^2-6x+4}$

7E: + & - Rational Expressions with Unlike Denominators

25) $\frac{3a}{6b^2} + \frac{5}{4}$

26) $\frac{4}{2} - \frac{5y}{6y^2}$

27) $\frac{4m}{2m+1} + \frac{3}{2m-4}$

28) $\frac{b-2}{3b-3} - \frac{4}{3}$

29) $\frac{4n}{n-1} + \frac{3}{n+2}$

30) $\frac{v+1}{2v-6} - \frac{2v}{2}$

7F: Solve each equation.

$$31) 1 - \frac{1}{2x} = \frac{1}{x}$$

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

$$33) \frac{1}{n+3} + \frac{n+1}{n^2+n-6} = \frac{1}{n-2}$$

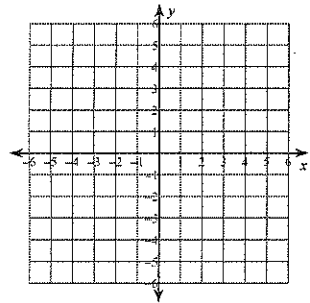
$$34) \frac{1}{b+3} = \frac{2}{b+1} - \frac{1}{b^2+4b+3}$$

$$35) 1 = \frac{1}{x+2} + \frac{2x-2}{x+2}$$

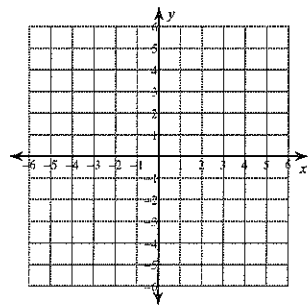
$$36) \frac{1}{v} = \frac{3v-9}{2v^2-2v} - \frac{1}{2v^2-2v}$$

Unit 3 Review: Sketch the graph of each line.

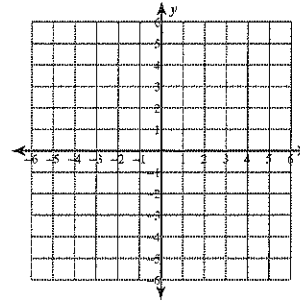
$$37) y = x + 5$$



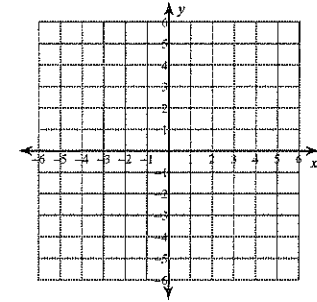
$$38) y = -\frac{1}{4}x - 1$$



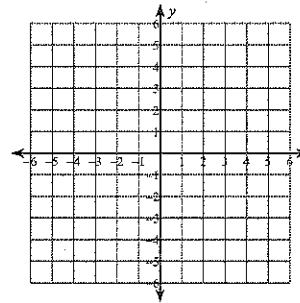
$$39) 6x - 5y = 25$$



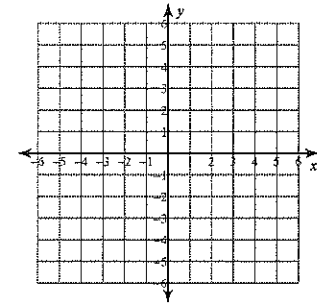
$$40) x + 4y = -8$$



$$41) -2 = -y + x$$



$$42) -15x - 3y - 15 = 0$$



Unit 2 Review: Solve each equation.

$$43) 120 = 2(4 - 7v)$$

$$44) -60 = 3(x + 8) - 6(1 - 6x)$$

$$45) -6m + 6(m + 3) = 4m + 6(8 + m)$$

Assignment

Date _____ Period _____

7A: Simplify each expression.

1) $\frac{4x}{6x^2} \cdot \frac{2}{3x}$

3) $\frac{6r+6}{6} \cdot r+1$

5) $\frac{3n^2-5n-2}{2n^2-2n-4} \cdot \frac{3n+1}{2(n+1)}$

7B: Multiply & Simplify each expression.

7) $\frac{2a^2}{2} \cdot \frac{3}{3a} \cdot a$

9) $\frac{4k^2-2k}{2k^2} \cdot \frac{2k}{4k^2-2k} \cdot \frac{1}{k}$

11) $\frac{3-2n}{5n^2} \cdot \frac{5n^2+28n+15}{10n^2-9n-9} \cdot \frac{-n-5}{5n^2}$

7C: Divide & Simplify each expression.

13) $\frac{6}{5n} \div \frac{5}{5n^3} = \frac{6n^2}{5}$

2) $\frac{9x^2}{9x^3} = \frac{1}{x}$

4) $\frac{x+2}{2x^2+4x} = \frac{1}{2x}$

6) $\frac{6x+3}{6x+9} = \frac{2x+1}{2x+3}$

8) $\frac{3x}{2} \cdot \frac{2}{3} = x$

10) $\frac{1}{n+3} \cdot \frac{n^2+6n+9}{2n} = \frac{n+3}{2n}$

12) $\frac{n-5}{5n-2} \cdot \frac{15n^2-26n+8}{3n-4} = \frac{n-5}{n-5}$

14) $\frac{5v^2}{7v^3} \div \frac{4v}{6v} = \frac{15}{14v}$

15) $\frac{x+8}{x^2-64} \div \frac{1}{x+1} = \frac{x+1}{x-8}$

17) $\frac{4n^2-14n+10}{2n-2} \div \frac{2n-5}{n-3} = \frac{n-3}{n-3}$

16) $\frac{1}{x+7} \div \frac{x-5}{x^2+10x+21} = \frac{x+3}{x-5}$

18) $\frac{5x+10}{25x-20} \div \frac{x+4}{4-5x} = \frac{-x-2}{x+4}$

7D: Add or Sub W?like Denominators remember to Simplify each expression.

19) $\frac{2x+2y}{15y^2} + \frac{x+y}{15y^2} = \frac{x+y}{5y^2}$

21) $\frac{n+1}{n^2+6n+9} + \frac{n+1}{n^2+6n+9} = \frac{2n+2}{n^2+6n+9}$

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

20) $\frac{4}{6y^3} - \frac{5x}{6y^3} = \frac{4-5x}{6y^3}$

22) $\frac{v+4}{8v^3+8v^2} - \frac{v-1}{8v^3+8v^2} = \frac{5}{8v^3+8v^2}$

24) $\frac{x-2}{2x^2-6x+4} - \frac{x-2}{2x^2-6x+4} = 0$

7E: + & - Rational Expressions with Unlike Denominators

25) $\frac{3a}{6b^2} + \frac{5}{4} = \frac{2a+5b^2}{4b^2}$

27) $\frac{4m}{2m+1} + \frac{3}{2m-4} = \frac{8m^2-10m+3}{2(m-2)(2m+1)}$

29) $\frac{4n}{n-1} + \frac{3}{n+2} = \frac{4n^2+11n-3}{(n-1)(n+2)}$

26) $\frac{4}{2} - \frac{5y}{6y^2} = \frac{12y-5}{6y}$

28) $\frac{b-2}{3b-3} - \frac{4}{3} = \frac{-3b+2}{3(b-1)}$

30) $\frac{v+1}{2v-6} - \frac{2v}{2} = \frac{-2v^2+7v+1}{2(v-3)}$

7F: Solve each equation.

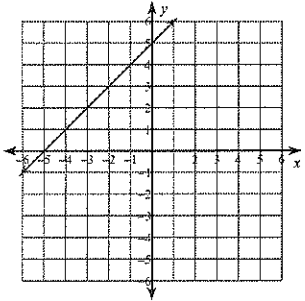
31) $1 - \frac{1}{2x} = \frac{1}{x}$
 $\left\{ \frac{3}{2} \right\}$

33) $\frac{1}{n+3} + \frac{n+1}{n^2+n-6} = \frac{1}{n-2}$
 $\{4\}$

35) $1 = \frac{1}{x+2} + \frac{2x-2}{x+2}$
 $\{3\}$

Unit 3 Review: Sketch the graph of each line.

37) $y = x + 5$

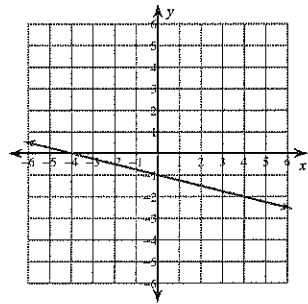


32) $\frac{1}{2x} = \frac{3}{2x} - \frac{2x+4}{x}$
 $\left\{ -\frac{3}{2} \right\}$

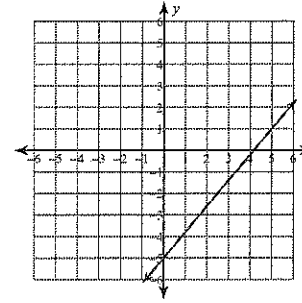
34) $\frac{1}{b+3} = \frac{2}{b+1} - \frac{1}{b^2+4b+3}$
 $\{-4\}$

36) $\frac{1}{v} = \frac{3v-9}{2v^2-2v} - \frac{1}{2v^2-2v}$
 $\{8\}$

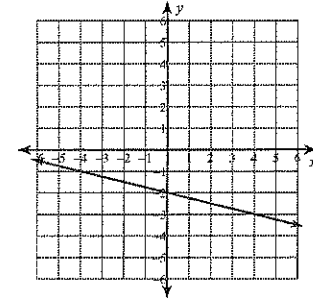
38) $y = -\frac{1}{4}x - 1$



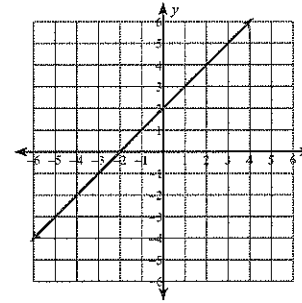
39) $6x - 5y = 25$



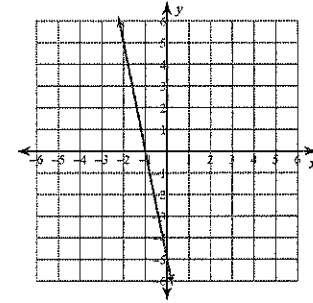
40) $x + 4y = -8$



41) $-2 = -y + x$



42) $-15x - 3y - 15 = 0$



Unit 2 Review: Solve each equation.

43) $120 = 2(4 - 7v)$
 $\{-8\}$

44) $-60 = 3(x + 8) - 6(1 - 6x)$
 $\{-2\}$

45) $-6m + 6(m + 3) = 4m + 6(8 + m)$
 $\{-3\}$