Keystone WARMUP: Do #10 & 15

(10) Jenny has a job that pays her $8 per hour plus tips ($t$). Jenny worked for 4 hours on Monday and made $65 in all. Which equation could be used to find t, the amount Jenny made in tips?

A. $65 = 4t + 8$

B. $65 = 8t \div 4$

C. $65 = 8t + 4$

D. $65 = 8(4) + t$

(15) A compound inequality is shown below.

$$5 < 2 - 3y < 14$$

What is the solution of the compound inequality?

A. $-4 > y > -1$

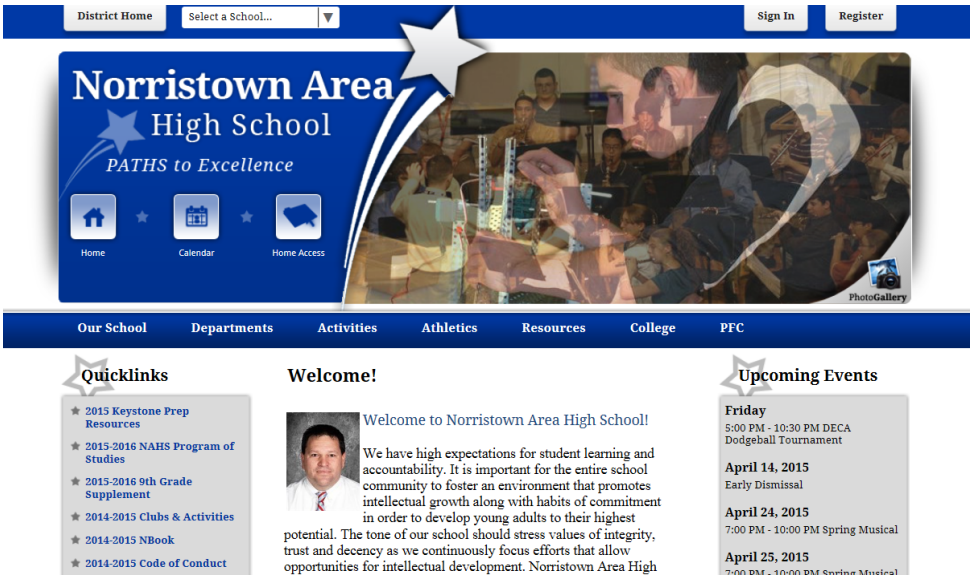
B. $-4 < y < -1$

C. $1 > y > 4$

D. $1 < y < 4$

Keystone Prep:
Daily problems -- Friday quizzes

Algebra Content: Frequent quizzes
First quiz: Friday 4/10 on Rational Expressions



http://mr-norman.wikispaces.com/Keystone+Prep

After School Algebra Keystone Preparation

Every Wednesday in Room 255
After school - 3:45pm

definition: A factor is a number or expression that is multiplied with another.

We can only cancel FACTORS!

Algebra 1 – WH
Rational Expressions Notes

Name:_____
Date:_____ Pd: ____

Objective: Students will simplify rational expressions.

Example 1: Simplify.

a. $\frac{3}{6} = \frac{1 \cdot 3}{1 \cdot 2 \cdot 3} = \frac{1}{2}$

b. $\frac{8}{24} = \frac{1}{3}$

Example 2: Simplify.

c. $\frac{12x^4}{6x^4} = \frac{3 \cdot 4 \cdot x^4}{2 \cdot 3 \cdot x^4} = \frac{2 \cdot 2}{2} = 2$

d. $\frac{30x^4}{48x^5} = \frac{5 \cdot 6}{8 \cdot 6 \cdot x} = \frac{5}{8x}$

Example 3: Simplify.

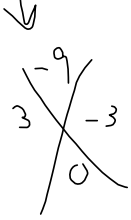
e. $\frac{9x+3}{12x+4} = \frac{3(3x+1)}{4(3x+1)} = \frac{3}{4}$

f. $\frac{40}{5x-40} = \frac{40}{5(x-8)} = \frac{5 \cdot 8}{5(x-8)} = \frac{8}{x-8}$

Example 4: Simplify.

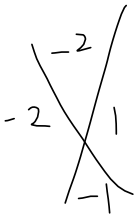
g. $\frac{x^2-9}{5x+15} = \frac{(x+3)(x-3)}{5(x+3)}$

$= \frac{x-3}{5}$



h. $\frac{x^2+6x+5}{x^2-x-2} = \frac{(x+1)(x+5)}{(x-2)(x+1)}$

$= \frac{x+5}{x-2}$



Example 5: Simplify.

i. $\dfrac{3x^2+3x-18}{2x^2+5x-3} = \dfrac{3(x^2+x-6)}{(x+3)(2x-1)}$

M: x^2+5x-6

U: $(x+6)(x-1)$

D: $(x+\frac{6}{2})(x-\frac{1}{2})$

S: $(x+3)(x-\frac{1}{2})$

S: $(x+3)(2x-1)$

$= \dfrac{3(x+3)(x-2)}{(x+3)(2x-1)}$

$= \dfrac{3(x-2)}{(2x-1)}$

Pg 3

① $\frac{16b^4}{32b^6} = \frac{1}{2b^2}$

② $\frac{s^2-5s-36}{s-9} = \frac{(s-9)(s+4)}{s-9} = s+4$

-36, -9, 4, -5

③ $\frac{d^2-4d-21}{d+3} = \frac{(d-7)(d+3)}{d+3} = d-7$

-21, -7, 3, -4

Homework:

Rational Expressions pg 2

Key #11

Name : _____ Score : _____

Teacher : _____ Date : _____

Simplifying Rational Expressions

Simplify each expression.

1) $\frac{6x + 6}{x + 1}$

2) $\frac{y^2 - 6y - 16}{y - 8}$

3) $\frac{h - 1}{8h - 8}$

4) $\frac{45b^3}{18b}$

5) $\frac{r^2 + 6r - 16}{r^2 + r - 6}$

6) $\frac{36n^2}{18n^5}$

7) $\frac{12}{6c - 24}$

8) $\frac{30p^6}{40p^2}$

9) $\frac{s - 1}{7s - 7}$

10) $\frac{g^2 - 6g + 5}{g^2 + 2g - 3}$

Name : _____ Score : _____

Teacher : _____ Date : _____

Simplifying Rational Expressions

Simplify each expression.

1) $\frac{16b^4}{32b^6}$

2) $\frac{s^2 - 5s - 36}{s - 9}$

3) $\frac{d^2 - 4d - 21}{d + 3}$

4) $\frac{r - 7}{r^2 - r - 42}$

5) $\frac{6y - 24}{y - 4}$

6) $\frac{48k^2 + 24k - 24}{12k^2 + 6k - 6}$

7) $\frac{24q^6}{48q^4}$

8) $\frac{p - 8}{4p - 32}$

9) $\frac{c^2 - 6c - 16}{c^2 - 3c - 10}$

10) $\frac{21h^2 - 10h - 24}{18h^2 - 51h + 36}$

3

Name : _____ Score : _____

Teacher : _____ Date : _____

Simplifying Rational Expressions

Simplify each expression.

1) $\frac{70}{10n + 60}$

2) $\frac{18s^6}{48s^6}$

3) $\frac{21h^2 - 54h - 27}{18h^2 - 57h + 9}$

4) $\frac{g^2 - 5g - 6}{g^2 + 10g + 9}$

5) $\frac{c - 9}{4c - 36}$

6) $\frac{15k^6}{18k^5}$

7) $\frac{56r^3}{24r^6}$

8) $\frac{4y - 12}{16}$

9) $\frac{z - 9}{z^2 - 3z - 54}$

10) $\frac{10q + 70}{50}$

Kuta Software - Infinite Algebra 1 Name_____

Simplifying Rational Expressions

Date_____ Period____

Simplify each expression.

1) $-\frac{36x^3}{42x^2}$

2) $\frac{16r^2}{16r^3}$

3) $\frac{16p^2}{28p}$

4) $\frac{32n^2}{24n}$

5) $-\frac{70n^2}{28n}$

6) $\frac{15n}{30n^3}$

7) $\frac{2r-4}{r-2}$

8) $\frac{45}{10a-10}$

9) $\frac{x-4}{3x^2-12x}$

10) $\frac{15a-3}{24}$

11) $\frac{v-5}{v^2-10v+25}$

12) $\frac{x+6}{x^2+5x-6}$

13) $\frac{27}{27x+18}$

14) $\frac{v^2-7v-30}{v^2-5v-24}$

15) $\frac{x^2+8x+12}{x^2+3x-18}$

16) $\frac{x^2-11x+18}{x^2+2x-8}$

17) $\frac{b^2+3b-28}{b^2-49}$

18) $\frac{v^2-3v-40}{v^2-11v+24}$

19) $\frac{4n-4}{6n-20}$

20) $\frac{v^2-5v-14}{v^2+4v+4}$

21) $\frac{6v^3+42v^2}{2v^2+26v+84}$

22) $\frac{x^3-x^2-42x}{2x^2-20x+42}$

23) $\frac{2v^2+10v-48}{8v+64}$

24) $\frac{9x^2+81x}{x^3+8x^2-9x}$

25) $\frac{x^2+2x-80}{2x^3-24x^2+64x}$

26) $\frac{3r^2-39r+90}{r^2-3r-70}$

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