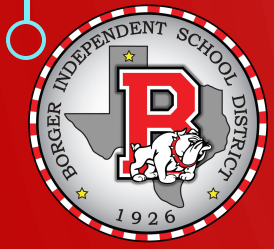


BOARD NOTES

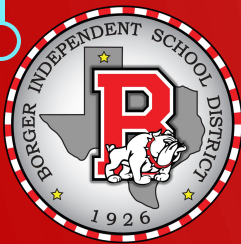
22 JANUARY 2020





2A.7 (F) determine the sum, difference, product, and quotient of rational expressions with integral exponents of degree one and of degree two;

We will be able to simplify complex fractions.



WHAT WE NEED:

- TI-84

I WILL BE ABLE TO COMPLETE MY
HOMEWORK GIVEN THE

- Equation



$$\frac{\frac{3}{4} - \frac{1}{8}}{2 + \frac{1}{12}}$$

4 8 12

$$\frac{\frac{1}{x+1} + \frac{1}{2}}{\frac{3}{2x^2+4x+2}}$$

x+1 2

$$= \frac{2x+2+x^2+2x+1}{3}$$

$$= \frac{x^2+4x+3}{3}$$

$$\frac{2(x+1)^2 \cdot \frac{1}{x+1} + 2(x+1)^2 \cdot \frac{1}{2}}{2(x+1)^2 \cdot 3}$$

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

$$2x^2+4x+2$$

$$2(x^2+2x+1)$$

$$a=x \quad b=1 \quad 2ab=2 \cdot x \cdot 1$$

$$* a^2+2ab+b^2 = (a+b)^2$$

$$* a^2-2ab+b^2 = (a-b)^2$$

$$2(x+1)^2$$

Use labor with...
 Analyzed Technology...
 Communicating Effectively...

...
 ...
 ...

apply mathematics to problems arising in everyday life, society, and the workplace



$x^2 + 5x = 0$
 $x(x+5) = 0$
 $x = 0, -5$

$$\frac{\frac{x+y}{x-y} - \frac{x-y}{x+y}}{\frac{x+y}{x-y} + \frac{x-y}{x+y}}$$

$$\frac{(x-y)(x+y) \cdot \frac{x+y}{x+y} - (x-y)(x+y) \cdot \frac{x-y}{x+y}}{(x-y)(x+y) \cdot \frac{x+y}{x+y} + (x-y)(x+y) \cdot \frac{x-y}{x+y}}$$

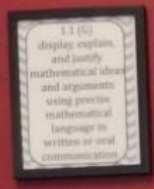
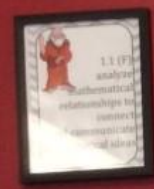
$$= \frac{x^2 + 2xy + y^2 - (x^2 - 2xy + y^2)}{x^2 + 2xy + y^2 + x^2 - 2xy + y^2}$$

$$= \frac{4xy}{2x^2 + 2y^2} = \frac{2(2xy)}{2(x^2 + y^2)}$$

$$= \frac{2xy}{x^2 + y^2}$$

$$\frac{(x-y) \cdot (x+y)}{x^2 - y^2}$$

- 1) $\frac{x^2 - 12x}{15x + 3}$
- 3) $\frac{20}{x+7}$





days until
Valentine's
Day

$$x \left(\frac{5}{x} + 2 = \frac{6}{x} \right) \rightarrow 5 + 2x = 6$$
$$2x = 1$$
$$x = \frac{1}{2}$$

LCD x 1

 ⊗

LHS $\frac{5}{\frac{1}{2}} + 2 = 5 \cdot \frac{2}{1} + 2 = 12$

RHS $\frac{6}{\frac{1}{2}} = 6 \cdot \frac{2}{1} = 12$

$$(x^2+x) \left(\frac{3}{x^2+x} \right)$$
$$x^2+x =$$
$$x+1$$
$$x$$

17
days until
Valentine's
Day ♥

$$(x^2+x) \left(\frac{3}{x^2+x} + \frac{3}{x+1} = -\frac{1}{x} \right) \rightarrow 3 + 3x = -(x+1)$$

$$3 + 3x = -x - 1$$

$$4x = -4$$

$$x = -1$$

No Soln

$$x^2+x = x(x+1) = \text{LCD}$$

$$x+1$$

$$x$$

$$\text{LHS } \frac{3}{(-1)^2-1} + \frac{3}{-1+1}$$

= 12

