Quiz 2

Thursday, February 11, 2021 10:41 AM

quiz-02

Name: Solutions _____ **Date:** _____

MATH 208 **Quiz 2**

Write the answer as a simple fraction reduced to lowest terms.

1) $\frac{a}{b}+\frac{b}{a}$ $= \frac{a^2}{ab} + \frac{b^2}{ab} = \frac{a^2+b^2}{ab}$

2) $\frac{a}{bc}-\frac{c}{ab}$ $= \frac{a^2}{ab^2c} - \frac{bc^2}{ab^2c} = \frac{a^2-c^2}{abc}$

3) $\frac{x^2}{y}\times\frac{y^6}{x^3}$ $= \frac{x^2y^6}{x^3y} = \frac{y^5}{x}$

4) $\frac{x}{y^3}\div\frac{x^2}{y}$ $= \frac{xy}{x^2y^3} = \frac{1}{xy^2}$

5) $\left(\frac{1}{7+h}-\frac{1}{7}\right)\div h$ $= \frac{1}{h}\left(\frac{7}{7(7+h)} - \frac{7+h}{7(7+h)}\right)$

$= \frac{1}{h}\left(\frac{-h}{7(7+h)}\right) = -\frac{1}{7(7+h)}$

6) $\frac{x^{-1}+y^{-1}}{x^{-2}-y^{-2}}$

$\frac{x^{-1}+y^{-1}}{(x^{-1}+y^{-1})(x^{-1}-y^{-1})} = \frac{1}{x^{-1}-y^{-1}} = \frac{1}{\frac{1}{x}-\frac{1}{y}} = \frac{1}{\frac{y-x}{xy}} = \frac{xy}{y-x}$

Round to the nearest integer

7) $17/3$ 6

8) $-5/19$ 0

9) Find the slope of the line that contains the points $(3,-5)$ and $(-4,10)$.

$m = \frac{y_2-y_1}{x_2-x_1} = \frac{10+5}{-4-3} = -\frac{15}{7}$

10) Find the x and y coordinates of the point at which the graph of $y=7x-4$ intersects the x axis.

$y=0 = 7x-4$

$7x = 4$

$x = 4/7$ $(4/7, 0)$

11) Find the x and y coordinates of the point at which the graph of $y=7x-4$ intersects the y axis.

$(0,-4)$