Math 1
Unit 2 - Complex fractions

Name_____
Period_____

Simplify the following problems as much as possible. Circle your final answer.

1. $\frac{-6}{\frac{1}{2}}$ $-6 \div -\frac{1}{2}$

$-6 \cdot \frac{-2}{1} = \boxed{12}$

2. $\frac{\frac{3}{5}}{-\frac{6}{}}$

$\frac{3}{1} \cdot \frac{-6}{5} = \boxed{\frac{-18}{5}}$

3. $\frac{-18}{\frac{3}{8}}$

$-18 \cdot \frac{8}{3} =$

$\boxed{-48}$

4. $\frac{\frac{1}{3}}{-3}$

$\frac{1}{3} \cdot \frac{1}{-3} = \boxed{-\frac{1}{9}}$

5. $\frac{-\frac{8}{9}}{-2}$

$\frac{4}{8} \cdot \frac{-1}{2} =$

$\boxed{\frac{4}{9}}$

6. $\frac{-\frac{21}{2}}{7}$

$\frac{-3}{-21} \cdot \frac{1}{7} = \boxed{\frac{-3}{7}}$

(7)

7. $\dfrac{\frac{12}{5}}{\frac{-8}{15}}$

$\frac{-3\,12}{18} \cdot \frac{15^{3}}{-8_{-2}} = \boxed{\frac{9}{2}}$

8. $\dfrac{\frac{x^3}{3xy}}{\frac{y^2}{3x}}$

$\frac{x^3}{3xy} \cdot \frac{3x}{y^2}$

$\boxed{\frac{x^3}{y^3}}$

9. $\dfrac{\frac{x-2}{4}}{x^2-4}$

$\frac{x-2}{4} \cdot \frac{1}{(x-2)(x+2)} =$

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

10. $\dfrac{\frac{y^2-y-6}{y^2-5y-14}}{\frac{y^2+6y+5}{y^2-6y-7}}$

$\frac{(y-3)(y+2)}{(y-7)(y+2)} \cdot \frac{(y-7)(y+1)}{(y+5)(y+1)}$

$\boxed{\frac{y-3}{y+5}}$

11. $\dfrac{\frac{x}{x-y}}{\frac{x^2}{x^2-y^2}}$

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

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

12. $\dfrac{\frac{x^2-x-12}{x^2-2x-15}}{\frac{x^2+8x+12}{x^2-3x-10}}$

$\frac{(x-4)(x+3)}{(x-5)(x+3)} \cdot \frac{(x-5)(x+2)}{(x+6)(x+2)}$

$\boxed{\frac{x-4}{x+6}}$