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Jan. 20 - bell ringer
Simplify.

Put your blue form on my front cart.

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

$$\frac{(y+2)(y-2)}{(y+2)(y-1)}$$

$$\boxed{\begin{array}{l} y-2 \\ \cancel{+} \\ y-1 \end{array}}$$

$$2) \frac{3a^2 + a - 2}{a^2 + 1a + 6}$$

$$\frac{3a-2(a+1)}{(a+6)(a+1)}$$

$$\boxed{\frac{3a-2}{a+6}}$$

Review

$$1) \frac{2}{3} \cdot \frac{3}{4}$$

$$\frac{1}{2}$$

$$2) \frac{5}{8} \div \frac{3}{4}$$

$$\frac{5}{8} \cdot \frac{4}{3} = \frac{5}{6}$$

Learning target:

You can multiply and divide rational expressions.

$$1) \frac{7x^2y}{12z^3} \cdot \frac{14z}{49xy^4}$$

~~b~~ ~~x~~

$$\frac{x^2yz}{6z^3xy^4} = \boxed{\frac{x}{6z^2y^3}}$$

2)

$$\frac{b+3}{4b-12} \cdot \frac{b^2 - 4b + 3}{b^2 - 7b - 30}$$

$$\frac{\cancel{b+3}}{\cancel{4(b-3)}} \cdot \frac{\cancel{(b-3)(b-1)}}{\cancel{(b-10)(b+3)}}$$

$$\boxed{\frac{b-1}{4(b-10)}}$$

$$3) \frac{3x+9}{x^2} \div (x+3)$$

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

$$\boxed{\frac{3}{x^2}}$$

$$4) \frac{x-5}{x^2-9x+18} \div \frac{x^2-25}{x-6}$$

$$\frac{x-5}{x^2-9x+18} \cdot \frac{x-6}{x^2-25}$$

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

$$\boxed{\frac{1}{(x-3)(x+5)}}$$

Assignment

F. 701-704

2-32E, 64-68E

Omit #6 and #22



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$$\begin{array}{r} 3a^2b^4 + 9a^3b - ba^5b \\ \hline 3a^2b \\ \hline 3a^2b(b^3 + 3a - 2a^3) \\ \hline 3a^2b \\ b^3 + 3a - 2a^3 \end{array}$$

$a \neq 0$
 $b \neq 0$

20)

$$\frac{6y^2(y-2)}{6(2y^2-3)}$$
$$\frac{y^2(y-2)}{(2y^2-3)}$$

22)

$$\frac{7a^3b}{7ab(3a+7b^2)}$$

$$\frac{a^2b}{3a+7b^2}$$

44)

$$\frac{(a+3)(a-1)}{(a^2-9)(a^2-1)}$$

$a \neq \pm 3$
 ± 1

$$\frac{(a+3)(a-1)}{(a+3)(a-3)(a+1)(a-1)} = \frac{1}{(a-3)(a+1)}$$

$$3B) \frac{9-a^2}{a^2-a-6} = \frac{-1(a^2-9)}{a^2-a-6}$$

$$\frac{-1(a+3)(a-3)}{(a-3)(a+2)}$$

$$3b) \frac{a^2-2a+1}{-a^2+2a-1}$$

$$\frac{\cancel{(a^2-2a+1)}}{-1\cancel{(a^2-2a+1)}} = \frac{1}{-1} = -1$$

42)

$$\frac{(3z-1)(z+2)}{(3z-1)(z-4)}$$

$$\frac{z+2}{z-4}$$

43)

$$\frac{(b+4)(b-2)}{(b^2-4)(b^2-16)}$$

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

$$Q5) \frac{(g+2)(g-1)}{(g-2)(g-1)}$$
$$\underline{g+2}$$

g-2

$$37) \frac{(4y-1)(y+2)}{(8y-1)(y+2)}$$

50)

$$\frac{(2t-5)(4t+3)}{(3t-7)(4t+3)}$$