

Do Now: #s 1 and 2

Classwork:

$$1. \frac{t(2t+w)}{4t^2 - 4tw + w^2} + \frac{w(2t-w)}{4t^2 - w^2} \quad 2. \frac{y^3}{4x^2 - 12xy + 9y^2} - \frac{1(-1)(2x-3y)}{3y^2 - 2xy}$$

$$\frac{(2t+w)(2t-w)^2}{(2t+w)(2t-w)^2} \quad \frac{y(2x-3y)^2}{y(2x-3y)^2} - \frac{y(3y-2x)(2x-3y)}{y(3y-2x)(2x-3y)}$$

$$\frac{2t^2 + tw + 2tw - w^2}{(2t-w)^2(2t+w)}$$

$$\frac{2t^2 + 3tw - w^2}{(2t-w)^2(2t+w)}, \quad t \neq \pm \frac{w}{2}$$

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

$$\frac{2x}{y(2x-3y)^2} \quad y \neq 0, \frac{2}{3}x$$

$$3. \frac{(x-3y)(x+2y)}{x^2 - y^2} + \frac{(x-2y)(x+y)}{x^2 + xy - 2y^2} + \frac{-3y(x-y)}{x^2 + 3xy + 2y^2}$$

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

$$\frac{x^2 - xy - by^2 + x^2 - xy - 2y^2 - 3xy + 3y^2}{(x-y)(x+y)(x+2y)}$$

$$\frac{2x^2 - 5xy - 5y^2}{(x-y)(x+y)(x+2y)}, \quad x \neq \pm y, -2y$$