

Honors Algebra II



MATH, ENGINEERING, AND SCIENCE ACADEMY

Unit 5 – Rational Functions

Unit Exam Review

Name: Review Papi

1. $\frac{x+2}{x^2-5x+6} \div \frac{x+4}{x^2+x-12}$

$$\frac{x+2}{(x-2)(x-3)} \cdot \frac{(x+4)(x-3)}{x+4} = \boxed{\frac{x+2}{x-2}}$$

2. $\frac{4p-12}{p^2+p-6} \times \frac{p^2-p-2}{p^2-2p-3}$

$$\frac{4(p-3)}{(p+3)(p-2)} \cdot \frac{(p-2)(p+1)}{(p-3)(p+1)} = \boxed{\frac{4}{p+3}}$$

3. $\frac{4}{x-2} + \frac{1}{x-3}$

$x-3$ $x-2$

$x-3$ $x-2$

$$\frac{4x-12}{(x-3)(x-2)} + \frac{x-2}{(x-3)(x-2)} = \boxed{\frac{5x-14}{(x-3)(x-2)}} \text{ or } \boxed{\frac{5x-14}{x^2-5x+6}}$$

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4. $\frac{3p}{p-1} + \frac{p}{p+6}$

Handwritten notes: $\cdot p+6$ (above), $\cdot p-1$ (above), $\cdot p+6$ (below), $\cdot p-1$ (below)

$$\frac{3p^2 + 18p}{(p+6)(p-1)} + \frac{p^2 - p}{(p+6)(p-1)}$$

$$= \frac{4p^2 + 17p}{(p+6)(p-1)}$$

OR

$$\frac{4p^2 + 17p}{p^2 + 5p - 6}$$

5. $\frac{3}{h-3} - \frac{7}{h+3} = \frac{-10}{h^2-9}$

$$\frac{3(h+3)(h-3)}{(h-3)(h-3)} - \frac{7(h+3)(h-3)}{(h+3)(h-3)} = \frac{-10}{(h+3)(h-3)}$$

$$3h + 9 - 7h + 21 = -10$$

$$-4h + 30 = -10$$

$$-4h = -40$$

$$h = 10$$