

Algebra 2 Chapter 8 Practice Test Solutions

$$5.) \frac{m^2 - 6m + 9}{m^2 - 9} \cdot \frac{m^3 - 9m}{m - 3}$$

$$\frac{(m-3)(m-3)}{(m-3)(m+3)} \cdot \frac{m(m^2-9)}{m-3}$$

$$\frac{\cancel{(m-3)}(m-3)}{\cancel{(m-3)}(m+3)} \cdot \frac{m(m+3)\cancel{(m-3)}}{\cancel{(m-3)}}$$

$$\frac{m-3}{m+3} \cdot \frac{m(m+3)}{1}$$

$$\boxed{m(m-3) \text{ or } m^2 - 3m}$$

$$6.) \frac{(c+3) \cdot 2c}{(c+3) \cdot (c-3)} - \frac{2c \cdot (c-3)}{(c+3) \cdot (c-3)} + \frac{3b}{c^2 - 9}$$

$$\frac{2c^2 + 3c - (2c^2 - 6c) + 3b}{(c+3)(c-3)}$$

$$\frac{2c^2 + 3c - (2c^2 - 6c) + 3b}{(c+3)(c-3)}$$

$$\frac{3c - 6c + 3b}{(c+3)(c-3)}$$

 \Rightarrow

$$\boxed{\frac{3b - 3c}{(c+3)(c-3)}, c \neq 3, -3}$$