

Review for Quiz:

What is the fraction of the shaded area?

1.  = $\frac{5}{12}$

2. $\frac{24}{68} = \frac{4 \cdot 6}{4 \cdot 17} = \frac{6}{17}$

3. $\frac{42x}{28x^2} = \frac{2 \cdot 21x}{14 \cdot 2x} = \frac{3 \cdot 7}{2 \cdot 2x} = \frac{3}{2x}$

4. $\frac{(3x-24)}{27} = \frac{3(x-8)}{3 \cdot 9} = \frac{(x-8)}{9}$

5. $\frac{(x-4)}{(3x^2-12x)} = \frac{(x-4)1}{3x(x-4)} = \frac{1}{3x}$

6. $\frac{(v^2-5v-14)}{(v^2+4v+4)} = \frac{(v+2)(v-7)}{(v+2)(v+2)} = \frac{v-7}{v+2}$

7. $\frac{9x^2+81x}{x^3+8x^2-9x} = \frac{9x(x+9)}{x(x^2+8x-9)} = \frac{9(x+9)}{(x-1)(x+9)} = \frac{9}{x-1}$

8. $\frac{12}{35} \times \frac{15}{22} = \frac{2 \cdot 6 \cdot 3 \cdot 5}{5 \cdot 7 \cdot 2 \cdot 11} = \frac{18}{77}$

9. $\frac{(6n+6)}{n+9} \cdot \frac{(n^2+6n-27)}{5n+5} = \frac{6(n+1)(n+9)(n-3)}{(n+9)5(n+1)} = \frac{6(n-3)}{5}$

10. $\frac{12p^3}{21} \div \frac{4p}{49} = \frac{12p^3}{21} \cdot \frac{49}{4p} = \frac{3 \cdot 4 p p p 7 \cdot 7}{3 \cdot 7 \cdot 4 p} = 7p^2 = 7p^2$

11. $\frac{(3x^3-25x^2-18x)}{(27x+18)} \cdot \frac{(x^3-729)}{(9x^2-4)}$

$\frac{(3x^3-25x^2-18x)}{(27x+18)} \cdot \frac{(9x^2-4)}{(x^3-729)}$

$\frac{x(3x^2-25x-18)}{9(3x+2)} \cdot \frac{(3x+2)(3x-2)}{(x-9)(x^2+9x+81)}$

$\frac{x(3x+2)(x-9)(3x+2)(3x-2)}{9(3x+2)(x-9)(x^2+9x+81)}$

$\frac{x(3x+2)(3x-2)}{9(x^2+9x+81)}$