Activity 1.3.5: Simplifying Rational Algebraic Expressions

Total points = 31

Answers

1. $\dfrac{x^2+3x}{x+3}$ ✓
   $=\dfrac{x(x+3)}{x+3}$ ✓
   $=x$ ✓
2. $\dfrac{2x^2+8x}{2x}$ ✓
   $=\dfrac{2x(x+4)}{2x}$ ✓
   $=x+4$ ✓
3. $\dfrac{x^2-16}{x-4}$ ✓
   $\dfrac{(x-4)(x+4)}{x-4}$ ✓
   $=x+4$ ✓
4. $\dfrac{x^3+64}{x^2-4x+16}$ ✓
   $=\dfrac{(x+4)(x^2-4x+16)}{x^2-4x+16}$ ✓
   $=x+4$ ✓
5. $\dfrac{2x^2-9x-5}{x-5}$ ✓
   $=\dfrac{(2x+1)(x-5)}{x-5}$ ✓
   $=2x+1$ ✓
6. $\dfrac{2x^2+4x}{x+2}$ ✓
   $=\dfrac{2x(x+2)}{x+2}$ ✓
   $=2x$ ✓
7. $\dfrac{4x^3-8x^2}{4x^2}$ ✓
   $=\dfrac{4x^2(x-2)}{4x^2}$ ✓
   $=x-2$ ✓
8. $\dfrac{4x^2-25}{2x-5}$ ✓
   $=\dfrac{(2x-5)(2x+5)}{2x-5}$ ✓
   $=2x+5$ ✓
9. $\dfrac{8x^3-27}{4x^2+6x+9}$ ✓
   $=\dfrac{(2x-3)(4x^2+6x+9)}{4x^2+6x+9}$ ✓
   $=2x-3$ ✓
10. $\dfrac{3x^2-12x+12}{x-2}$ ✓
    $=\dfrac{3(x^2-4x+4)}{x-2}$ ✓
    $=\dfrac{3(x-2)^2}{x-2}$ ✓
    $=3(x-2)$ ✓

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