

Name:

Period:

Date:

Tiered Practice: Simplifying Rational Expressions by Factoring

Each level must be checked by the teacher BEFORE you try problems in the next level. Factor all polynomials completely. Circle your final answer. You must show work to get credit.

You need 6/8 correct. Level 1: _____ Extra credit: _____

1. $\frac{-36x^3}{42x^2}$	2. $\frac{16x^2y}{28xy}$	3. $\frac{-70x^2y}{28xy^2}$	4. $\frac{3(x-5)(5x+1)}{15(x-5)}$
5. $\frac{3x(3x+1)(3x-1)}{3x^2(3x-1)(3x-1)}$	6. $\frac{4(x+8)^2}{8(x+8)}$	7. $\frac{2x-4}{x-2}$	8. $\frac{15x-3}{24}$

You need 6/8 correct. Level 2: _____ Extra credit: _____

9. $\frac{4x-4}{6x-20}$	10. $\frac{x-5}{x^2-10x+25}$	11. $\frac{x^2+5x-6}{x+6}$	12. $\frac{x^2+3x-28}{x^2-49}$
13. $\frac{x^2-11x+18}{x^2+2x-8}$	14. $\frac{2x^2+10x-48}{8x+64}$	15. $\frac{8x^2+10x-3}{16x^2-1}$	16. $\frac{6x^2+4x}{6x^2+13x+6}$

You need 4/6 correct. Level 3: _____ Extra credit: _____

17. $\frac{16x-64}{x^3-64}$	18. $\frac{x^4-81}{x^2+12x+27}$	19. $\frac{10x^4-20x^2-150}{5x^2+15}$
20. $\frac{3x^3+6x^2+12x}{x^3-8}$	21. $\frac{x^3-5x^2-3x+15}{x^2-8x+15}$	22. $\frac{x^6+2x^3-24}{x^4-4x^3+6x-24}$

Extra credit: _____

23. $\frac{108x^5-243x^3-4x^2+9}{12x^2+14x-6}$	24. $\frac{2x^3-11x^2-10x+75}{x^2-8x+15}$
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