Lesson 7.3 Factoring: GCF First

Name: _____ Date: _____

Pull out the greatest common factor — the number AND the variable part. Check by multiplying back. Last five are challenge problems!

1. Factor completely: $16x^4 - 24x^2$

show your work

2. Factor completely: $20x^3 - 15x$

show your work

3. Factor completely: $24x^3 + 32x$

show your work

4. Factor completely: $32x^2 - 24x$

show your work

5. Factor completely: $12x^2 + 15x$

show your work

6. Factor completely: $7x^3 - 21x^2$

show your work

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7. Factor completely: $10x^2 + 6x$

show your work

8. Factor completely: $2x + 8$

show your work

9. Factor completely: $25x - 10$

show your work

10. Factor completely: $6x^3 - 9x^2$

show your work

11. Factor completely: $28x^4 + 21x^2$

show your work

12. Factor completely: $12x^3 + 30x$

show your work

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Lesson 7.3 Factoring: GCF First

13. Factor completely:
$30x^4 + 24x^3 - 18x^2$

show your work

14. Factor completely:
$10x^3 + 25x^2 + 20x$

show your work

15. Factor completely:
$15x^2 + 20x - 15$

show your work

16. Factor completely:
$7x^3 + 14x^2 + 28x$

show your work

17. Factor completely:
$10x^3 - 2x^2 + 2x$

show your work

18. Factor completely:
$24x^3 + 6x^2 - 6x$

show your work

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19. Factor completely:
$20x^3 + 5x^2 + 15x$

show your work

20. Factor completely:
$20x^3 - 12x^2 + 20x$

show your work

21. Factor completely:
$12x^4 + 18x^3 - 6x^2$

show your work ★ CHALLENGE

22. Factor completely: $-8x^2 + 20x$

show your work ★ CHALLENGE

23. Factor completely: $15x^3 - 10x$

show your work ★ CHALLENGE

24. Factor completely:
$3x(x + 2) + 5(x + 2)$

show your work ★ CHALLENGE

25. A student factored $6x^2 + 9x$ as $3(2x^2 + 3x)$. Is that factored completely? Explain.

show your work ★ CHALLENGE

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