

Algebra 1

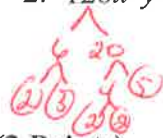
Practice Quiz 8.1-8.3

NAME KEY

Factor the Monomial completely. (1 Point)

1. $24x^3y$ $2 \cdot 2 \cdot 2 \cdot 3 \cdot x \cdot x \cdot x \cdot y$

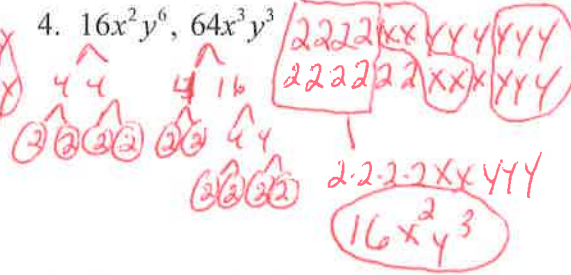
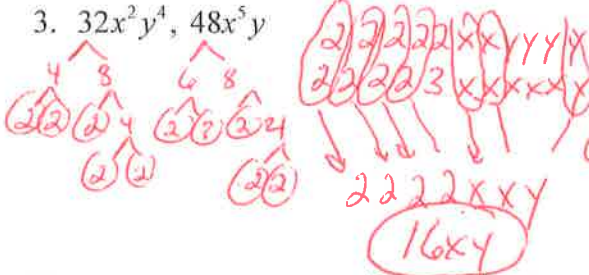
2. $120x^3y^2$ $2 \cdot 2 \cdot 2 \cdot 3 \cdot 5 \cdot x \cdot x \cdot x \cdot y \cdot y$



Find the GCF of each set of monomials. (2 Points)

3. $32x^2y^4, 48x^5y$

4. $16x^2y^6, 64x^3y^3$



1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

Factor each polynomial. Remember to use the factor methods in order: GCF, Grouping, General Trinomial. (3 Points)

5. $5x^2 - 15$

6. $x^2 + 7x + 10$

$5(x^2 - 3)$

$(x+2)(x+5)$

7. $x^2 - x - 20$

8. $3x^2 - 9x + 4x - 12$

$(x-5)(x+4)$

$3x(x-3) + 4(x-3)$

$(3x+4)(x-3)$

9. $x^2 - 11x + 28$

10. $4x^3 - 12x^2 + 16x$

$(x-4)(x-7)$

$4x(x^2 - 3x + 4)$

11. $4x^2 + 12x + 7x + 21$

12. $x^2 + 5x - 24$

$4x(x+3) + 7(x+3)$

$(x+8)(x-3)$

$(4x+7)(x+3)$

Points (30) _____

Factor each polynomial. Remember to use the factor methods in order: GCF, Grouping, General Trinomial. (3 Points)

13. $6x^4 + 9x^2$

$3x^2(2x^2 + 3)$

14. $x^2 - 18x + 32$

$(x-2)(x-16)$

15. $x^2 + 5x - 36$

$(x+9)(x-4)$

16. $x^2 + 11x + 30$

$(x+5)(x+6)$

17. $15x^2y^5 - 18x^4y^2$

$3x^2y^2(5y^3 - 6x^2)$

18. $8x^2 - 12x + 6x - 9$

$4x(2x-3) + 3(2x-3)$
 $(4x+3)(2x-3)$

Solve each equation. Check your solutions. (3 Points)

19. $(x+2)(x-6) = 0$

$x+2=0$ $x-6=0$
 $x=-2$ $x=6$

20. $x(x+4) = 0$

$x=0$ $x+4=0$
 $x=-4$

21. $3x^2 - 6x = 0$

$3x(x-2) = 0$
 $3x=0$ $x-2=0$
 $x=0$ $x=2$

22. $6x^2 = 18x$

$6x^2 - 18x = 0$
 $6x(x-3) = 0$
 $6x=0$ $x-3=0$
 $x=0$ $x=3$

23. $x^2 + 2x - 24 = 0$

$(x+6)(x-4) = 0$
 $x+6=0$ $x-4=0$
 $x=-6$ $x=4$

24. $x^2 - 11x = -18$

$x^2 - 11x + 18 = 0$
 $(x-2)(x-9) = 0$
 $x-2=0$ $x-9=0$
 $x=2$ $x=9$

13. _____

14. _____

15. _____

16. _____

17. _____

18. _____

19. _____

20. _____

21. _____

22. _____

23. _____

24. _____

Points (36) _____