

[Note: This worksheet is homework. Please keep it with your other homework for any homework checks.]

Factor the common (monomial) term. If there is no common term, clearly state so.

1. $8t - 24$

2. $-14y - 7$

3. $28u^2 - 14u$

4. $7s^2 + 9t^2$

5. $10ab + 10a^2b$

6. $32x^5 - 2x^3 + 6x$

7. $2x^2y^3z^4 - 4xy^2z^2 + 18x^3y^3z^3$

8. $-3abc^2 + 6a^3b - 12ac$

Factor the following polynomials by grouping.

9. $2x - 2y + 3x^2 - 3xy$

10. $2 - 2y + 2x - 2xy$

11. $a^2b + a + 4ab + 4$

12. $r^4s - r^3s^2 + 2sr - 2s^2$

13. $3x^2 - 12xy + 2x - 8y$

14. $5x + 2x^3 - 5 - 2x^2$

15. $6x + 12a + 2x^2 + 4xa$

Factor each of the following quadratic polynomials using one of the special forms. If it is not a special form, clearly state so and do not factor it.

$$(x^2 + 2ax + a^2) = (x + a)^2$$

$$(x^2 - 2ax + a^2) = (x - a)^2$$

$$(x^2 - a^2) = (x + a)(x - a)$$

16. $x^2 + 6x + 9$

17. $49 - a^2$

18. $x^2 + 3x + 2$

19. $x^2 - 4x + 4$

20. $x^2 + x - 20$

21. $x^2 - 9$

22. $36 + 12x + x^2$

23. $5 - 10x + x^2$

24. $4x^2 + 4x + 1$

25. $25x^4 - 16$

26. $36x^2 - 24x + 4$

27. $100x^2 + 60x + 9$