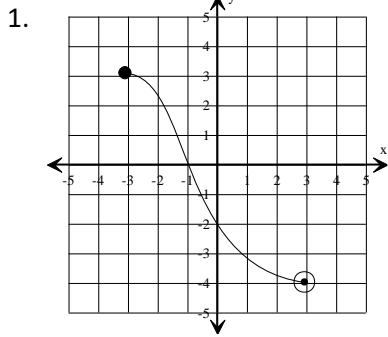
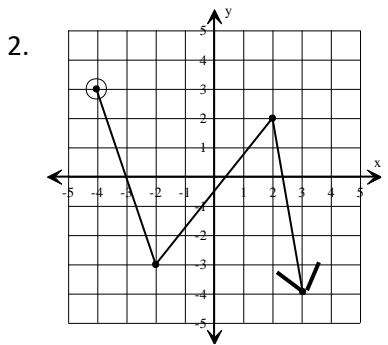


Identify the **domain** and **range** of the function.



Domain

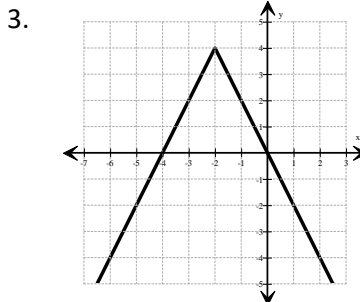
Range



Domain

Range

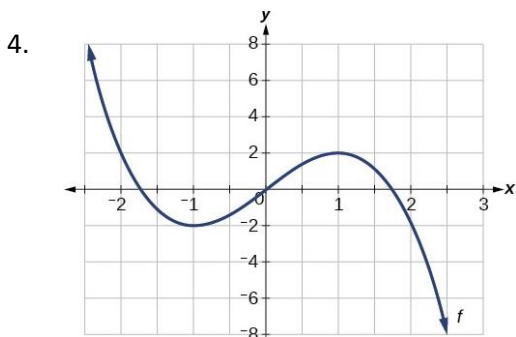
Identify the **turning points**, **increasing intervals** and **decreasing intervals**.



Turning points

Increasing Intervals

Decreasing Intervals



Turning points: _____

Increasing Intervals: _____

Decreasing Intervals: _____

Simplify the expression.

5. $5x^8y \cdot 9x^{-5}y^4$

6. $-2x^{-3}y^2 \cdot 6xy^7$

7. $8x^0y \cdot 3x^2y^{13}$

8. $4x^{-2}y^3 \cdot \frac{x^{-3}}{-2}$

9. $(2x^7yz^5)^3$

10. $(5xy^4z^6)^2$

11. $\frac{y^3}{y^{-11}}$

12. $\frac{-3n^{-8}}{n^{-3}}$

Find the roots.

13. $\sqrt{84}$

14. $\sqrt{120}$

15. $\sqrt[3]{56}$

16. $\sqrt[4]{112}$

Add or subtract the polynomials

17. $(5x^3 - 4x - 13) + (-2x^3 + 9x - 1)$

23. $(8x + 3)^2$

18. $(6x^2 + 11x - 5) - (-x^2 + 2x + 7)$

24. $(2x - 5)^2$

Extension: Add and subtract the polynomials

19. $(7x - 8) + (-4x + 3) - (-2x + 1)$

25. $(x + 3)(x - 3)$

Multiply the polynomials

20. $2x(5x^2 - 3x + 1)$

26. $(7x - 2)(7x + 2)$

21. $(4x - 5)(x + 2)$

27. $(x + 5)(2x^2 + 11x - 4)$

22. $(x - 3)(2x - 7)$

28. $(x - 3)(6x^2 - x + 2)$