U2L3 WKST

Practice

Identify as a monomial, binomial, or trinomial.

1. $5xyz$ **2.** $x + 2y$ **3.** $a - 2b + 3c$

4. $x^2 + y^2$ **5.** 23 **6.** $x - y + 2$

State the degree of each monomial.

7. $25x$ **8.** $25x^2y^2$ **9.** 17

10. $2x^2y^3$ **11.** $-5x^3y^4$ **12.** $-6xy^4z$

State the degree of each polynomial.

13. $5x^2y^2 + 3xy^3$

14. $3x + 2y - 5z$

15. $x^4 + 2x^3 + 3x^2 + 4$

16. $4x^4y^2 + 2x^3y^5 - 23$

17. $3x - 2y + z^2$

18. $25m^3n + 36m^3n^3$

19. $-5x^4y^2z + 2x^2y^2z^2$

Arrange the terms in each polynomial in descending powers of x.

20. $1 + x^3 + x^2 + x^5$

21. $5 - 3x^3 + 2x$

22. $5y^2 + 2xy - x^2$

23. $25xy^2 - 5x^2y + 3x^3y^3 - 4x^4$

24. $5ax + 7b^2x^4 - 3x^3 + 4abx^2$

Arrange the terms in each polynomial in ascending powers of x.

25. $3x^2 - 2x^3 + 5x^5 + x - 2$

26. $4x^4 + x^2 - 3x^3 + 5 - x$

27. $4xy^2 - 2x^2y^2 - 3x^4 + 2x^3y$

28. $5x^2yz^2 + 2xy^4z + 3x^3y^4z^2 - 3$

29. $z - xy + x^2$

30. $x^2 - 2xy - 3x^3 + 16$

31. $2x^3y + 3xy - x^5$

32. $3x^3y^2 + x^4y + xy - 1$

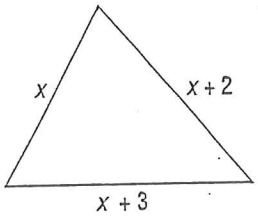
Problems and Applications

33. Identify each type of polynomial.

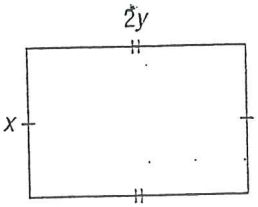
a) $\frac{4\pi r^3}{3}$ **b)** $\pi r^2 + 2\pi rh$ **c)** $4\pi r$

34. What type of polynomial is represented by the perimeter of each of these figures?

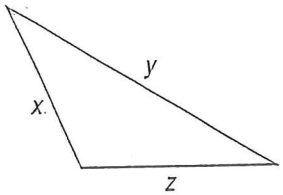
a)



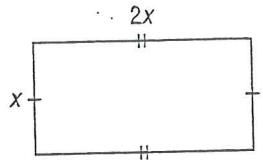
b)



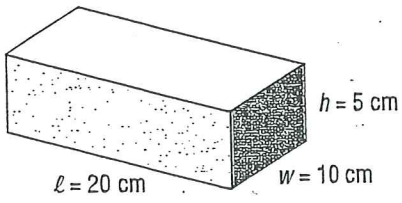
c)



d)



35. a) Calculate the area of each face of this box.



b) What is the total area of the box?

c) Write a polynomial that can be used to calculate the answer you gave in part b).

36. The formula for the volume of a rectangular jewellery box is lwh. Its dimensions are 25 cm × 18 cm × 17 cm. It has 2 cm thick walls. What is the volume of the box's interior to the nearest cubic centimetre?

37. Write a problem that can be solved with a polynomial. Have a classmate solve your problem.