

Determine whether each expression is a polynomial. Then, write it in standard form and identify its highest degree, type, leading coefficient, and constant term. (use your notes to help you)

1) -4^x

Is a polynomial? **YES NO**

Highest Degree: _____

Leading Coeff.: _____

Type: _____

Constant: _____

2) $3x - 5$

Is a polynomial? **YES NO**

Highest Degree: _____

Leading Coeff.: _____

Type: _____

Constant: _____

3) $6 - n^2 + 5n^3$

Is a polynomial? **YES NO**

Highest Degree: _____

Leading Coeff.: _____

Type: _____

Constant: _____

4) $5z + 2z^3 - z^2 + 3z^4$

Is a polynomial? **YES NO**

Highest Degree: _____

Leading Coeff.: _____

Type: _____

Constant: _____

Find the sum or difference of each polynomial.

5) $(5x^2 - 3) + (8x^2 - 1)$

6) $(h^2 + 4h - 4) + (5h^2 - 8h + 2)$

7) $(4m^2 - m + 2) + (-3m^2 + 10m + 7)$

8) $(6c^2 + 3c + 9) - (3c - 5)$

9) $(3x^2 - 8) - (4x^3 + x^2 - 15x + 1)$

10) $(-n^2 + 2n) - (2n^3 - n^2 + n + 12)$

11) $(9p^2 - 6p^3 + 3 - 11p) + (7p^3 - 3p^2 + 4)$

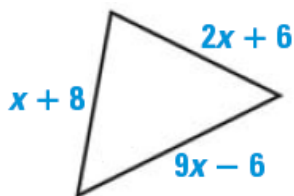
12) $(4d - 6d^3 + 3d^2) - (9d^3 + 7d - 2)$

13) $(3r^2s + 5rs + 3) + (-8rs^2 - 9rs - 12)$

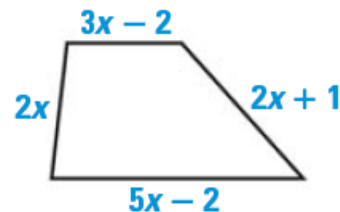
14) $(8a^2b - 6a) - (2a^2b - 4b + 19)$

Write a polynomial that represents the perimeter of the figure.

15)



16)



17) Find the perimeter of a rectangle whose sides are $(x + 8)$ and $(3x - 9)$.

18) Find the perimeter of a square with a side of $(5x - 2)$.