

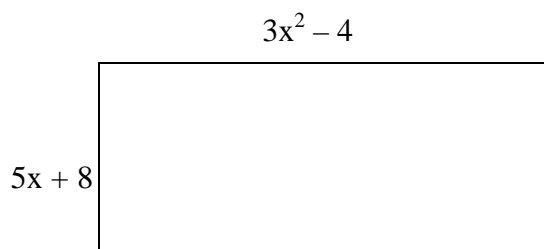
Polynomials

Simplify each of the following expressions.

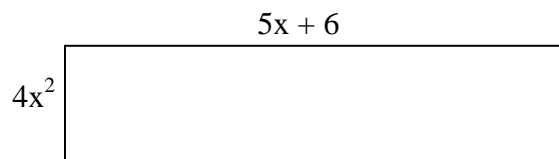
1. $3x^2(-4x^4) + (2x^3)^2$

2. $\frac{16y^7}{8y} + 9y^5(y)$

3. Find a polynomial that represents the perimeter of the rectangle in the figure.
Hint: The opposite sides of a rectangle are equal in length.



4. Write a polynomial that represents the area of the rectangle in the figure.
Hint: The area of a rectangle is the length times the width.



5. Suppose someone offers you a job for 30 days with the following conditions. The person will pay you 2 cents the first day and then will double your salary each day thereafter.

The first day you will be paid 2¢ .

The second day you will be paid $2(2\text{¢}) = 4\text{¢} = 2^2\text{¢}$.

The third day you will be paid $2(4\text{¢}) = 8\text{¢} = 2^3\text{¢}$.

The fourth day you will be paid $2(8\text{¢}) = 16\text{¢} = 2^4\text{¢}$.

What will you be paid on the 30th day?