1. Multiply.

a) $(u-5)(3u^2-7u+2)$

b) $(x^2+x-2)(x^2-3x-2)$

2. Use "special product" formulas to find the products.

a) $(5x+4)(5x-4)$
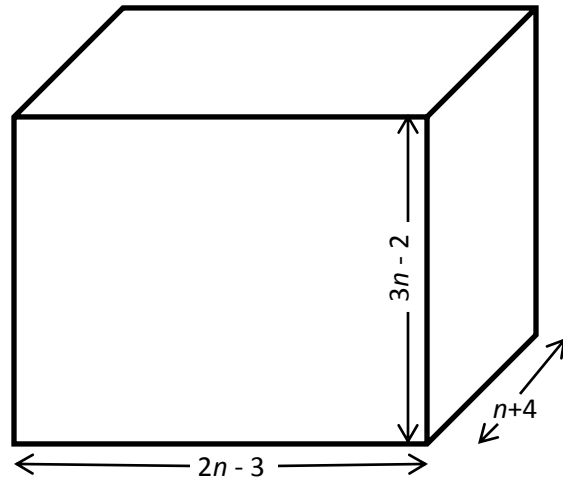
b) $(3x-8)^2$

c) $(4x+3)^2$

3. Write each as a polynomial.
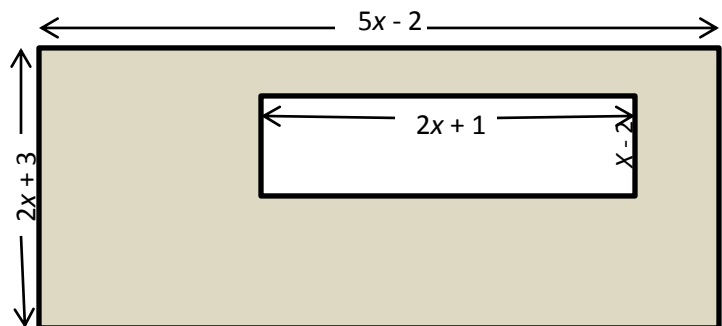
a) $(4-a)^3$

b) $(c+5)^2(c-5)^2$

c) $(2g-1)^4$

4. Write a polynomial that represents the volume of this rectangular box.
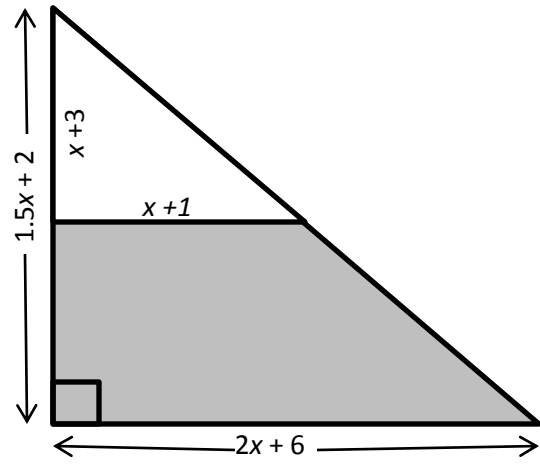
$3n - 2$

$n+4$

$2n - 3$

5. Write a polynomial for the rectangular box shown above in problem 4, if the length and width are both increased by 2 and the height is decreased by 3.

Find the area of the shaded region in each problem.

6.

$5x - 2$

$2x + 1$

$2x + 3$

$x - 2$

7.

Triangle with height $1.5x + 2$ marked on the left side, with $x + 3$ labeling the upper portion. The top horizontal line is labeled $x + 1$. The base is labeled $2x + 6$.

8.

Rectangle with top side labeled $3x + 4$, left side labeled $2x + 2$, and bottom left segment labeled $x + 3$.