59. A greeting card company makes boxes for its cards by cutting a square out of each corner of a 10-inch by 12-inch sheet of cardboard, then folding up the sides and gluing them.
   a. Write a polynomial for the volume of a box if the side of the cut-out square is x inches.
   b. Write a polynomial for the surface area of the box (the top is not included).

60. a. Write a polynomial for the area between two concentric circles if the radius of the inner circle is 8 feet less than the radius of the outer circle. What is the area of a circular driveway as described above if its outer radius is 24 feet?
   b. Write a polynomial for the volume between two concentric spheres if the radius of the outer sphere is h units greater than the radius of the inner sphere. What is the volume of the atmosphere of the earth if the earth's radius is 4000 miles and the atmosphere is 250 miles thick?

B

■ *Simplify.*

61. $a^n(2a^n - a)$

62. $(3a^n + 2)(a^n - 3)$

63. $2b^{3n-2} \cdot 3b^{2n-3}$

64. $(b^{2n-1})^3$

■ *Verify each product.*

65. $(x + a)^3 = x^3 + 3ax^2 + 3a^2x + a^3$

66. $(x - a)^3 = x^3 - 3ax^2 + 3a^2x - a^3$

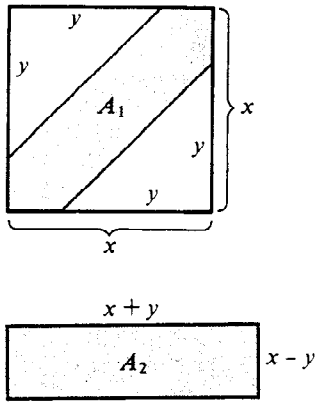
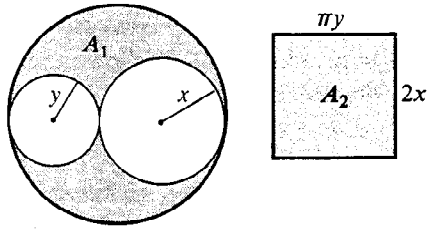
■ *Factor completely.*

67. $2x^n - 4x^{2n}$

68. $6x^{n+2} + x^{n+1} - x^n$

■ *Show that the shaded areas are equal.*

69.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