

**LESSON**  
**8.2****Practice A**

For use with the lesson "Multiply Polynomials"

**Find the product.**

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

2.  $2y(3y^3 + y^2 - 4)$

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

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

5.  $-w^3(w^2 + 3w)$

6.  $-a^2(a^2 + 3a - 1)$

**Use a table to find the product.**

7.  $(x + 1)(x - 4)$

8.  $(y + 6)(y + 2)$

9.  $(a - 5)(a - 3)$

10.  $(2m + 1)(m + 3)$

11.  $(3z + 4)(z - 5)$

12.  $(d + 6)(3d - 1)$

**Use a vertical or a horizontal format to find the product.**

13.  $(y + 8)(y - 3)$

14.  $(n + 5)(n + 6)$

15.  $(3x - 2)(x + 5)$

16.  $(4a + 1)(2a - 1)$

17.  $(w + 1)(w^2 + 2w + 1)$

18.  $(m - 2)(m^2 - 2m + 3)$

**Use the FOIL pattern to find the product.**

19.  $(y - 3)(8y + 1)$

20.  $(5b - 1)(3b + 2)$

21.  $(2d - 4)(3d - 1)$

22.  $(3x + 1)(2x + 2)$

23.  $(6x - 2)(x + 4)$

24.  $(2s - 5)(s + 3)$

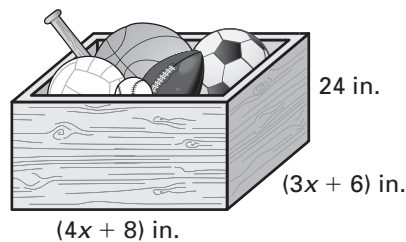
25.  $(8c + 2)(5c - 7)$

26.  $(8p - 3)(2p - 5)$

27.  $(14t - 2)(t + 2)$

- 28. Volume** You have come up with a plan for building a wooden box to hold all of your sports equipment as shown.

- Write a polynomial that represents the volume of the box.
- Find the volume of the box when  $x = 10$ .



- 29. National Park System** During the period 1990–2002, the number  $A$  of acres (in thousands) making up the national park system in the United States and the percent  $P$  (in decimal form) of this amount that is parks can be modeled by

$$A = 211t + 76,226$$

and

$$P = -0.0008t^2 + 0.009t + 0.6$$

where  $t$  is the number of years since 1990.

- Find the values of  $A$  and  $P$  for  $t = 0$ . What does the product  $A \cdot P$  mean for  $t = 0$  in the context of this problem?
- Write an equation that models the number of acres (in thousands) that are just parks as a function of the number of years since 1990.