



Evaluate each expression for  $n = -3$ .

33.  $5n^2 - 5(2n - 3)^2$                       34.  $(4n)^2 + 48 \div (-4n)$
35.  $\frac{n^2 + 9}{n^2}$                                       36.  $5(2n - 3)^2$
37. **Skydiving** The formula  $d = 16t^2$  describes the number of feet  $d$  a skydiver falls in  $t$  seconds of free fall assuming there is no air resistance. How far does a skydiver fall between the third and fourth seconds?
38. **Model Rockets** You can use the formula  $h = 160t - 16t^2$  to estimate the number of feet a model rocket rises in  $t$  seconds. How high is a rocket 2 seconds after takeoff?
39. **Writing in Math** Can the square of a number be negative? Explain.
40. The formula for the volume of a cone is  $V = \frac{1}{3}\pi r^2 h$ , where  $r$  is the radius, and  $h$  is the height. The formula for the volume of a sphere is  $V = \frac{4}{3}\pi r^3$ , where  $r$  = the radius. How many fewer cubic units of space does a sphere with a radius of 3 units occupy than a cone with a radius of 6 units and a height of 9 units? Use  $\pi \approx 3.14$ .
41. **Reasoning** Does  $(ab)^2 = ab^2$  for any values of  $a$  and  $b$ ? Explain.
42. **Challenge** Write an expression for 100 using five 5's.

**Test Prep and Mixed Review** **Practice**

**Multiple Choice**

43. The number of square feet that represent the area of a square is twice the number of feet that represents the perimeter of the square. Which of the following could be the area of the square?  
 (A)  $4 \text{ ft}^2$             (B)  $16 \text{ ft}^2$             (C)  $36 \text{ ft}^2$             (D)  $64 \text{ ft}^2$
44. In science class, Julian learned that he can use the formula  $C = \frac{5}{9}(F - 32)$  to convert between degrees Celsius  $C$  and degrees Fahrenheit  $F$ . If the temperature outside is  $95^\circ\text{F}$ , what is the temperature in degrees Celsius?  
 (F)  $35^\circ\text{C}$             (G)  $63^\circ\text{C}$             (H)  $113^\circ\text{C}$             (J)  $203^\circ\text{C}$
45. In Amanda's CD collection,  $\frac{1}{3}$  of the CDs are pop and  $\frac{1}{5}$  are rock. Of her rock CDs,  $\frac{1}{2}$  of the artists are bands and  $\frac{1}{4}$  are solo female singers. The rest of her CDs are movie soundtracks. What fraction of Amanda's CDs are soundtracks?  
 (A)  $\frac{1}{15}$             (B)  $\frac{1}{8}$             (C)  $\frac{7}{15}$             (D)  $\frac{8}{15}$

**GO for Help**

For Exercises	See Lesson
46–49	2-2

Write each decimal as a fraction in simplest form.

46. 0.3                      47. 6.36                      48. 0.003                      49. 0.45