Name

6-1A Lesson Master

Questions on SPUR Objectives
See Student Edition pages 446–449 for objectives.

SKILLS Objective A

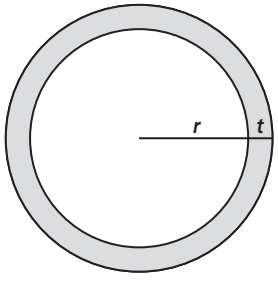
In 1–6, expand the expression.

1. $(x - 3)(x + 4)$ _____
2. $(3n + 1)(2n - 5)$ _____
3. $(3x - y)(3x + y)$ _____
4. $(x + 5)^2$ _____
5. $(3v + 5)^2$ _____
6. $(a - b)^2$ _____
7. Write the CAS command you could use to expand $(1.2x + y)\left(\frac{2}{3}x - y\sqrt{3}\right)$. Include all required parentheses.

_____

USES Objective I

8. Xavier wants to frame an 8" by 10" photograph. The framing material is x inches wide.
   a. Find an expression for the total area of the frame and photo. _____
   b. Find an expression for the area of the frame not including the photo. _____
9. A page of a book is 15 cm by 22 cm. If the margins are M cm on every side, what is the area of the printed part of the page? _____
10. Pipes are often measured by their inner and outer diameters. Suppose a pipe has an inner radius of r inches and the walls are t inches thick. Find an expression for the area of the shaded region in terms of r and t for the figure at the right.



_____

11. A city parks department wants to build a brick walkway around a rectangular flower garden. The garden is 6 feet wide and 25 feet long.
   a. Find an expression for the area of the walkway if it is x feet wide. _____
   b. Each brick covers $\frac{1}{4}$ square foot. How many more bricks are needed to make a five-foot wide walkway than to make a four-foot wide walkway? _____