

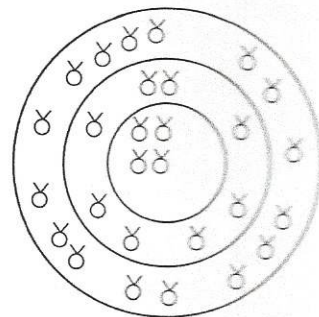
Skills Practice

Problem-Solving Investigation: Look for a Pattern

Look for a pattern in Exercises 1–6.

1. **YARN** A knitting shop is having a yarn sale. One skein sells for \$1.00, 2 skeins sell for \$1.50, and 3 skeins sell for \$2.00. If this pattern continues, how many skeins of yarn can you buy for \$5.00?

2. **BIOLOGY** Biologists place sensors in 8 concentric circles to track the movement of grizzly bears throughout Yellowstone National Park. Four sensors are placed in the inner circle. Eight sensors are placed in the next circle. Sixteen sensors are placed in the third circle, and so on. If the pattern continues, how many sensors are needed in all?

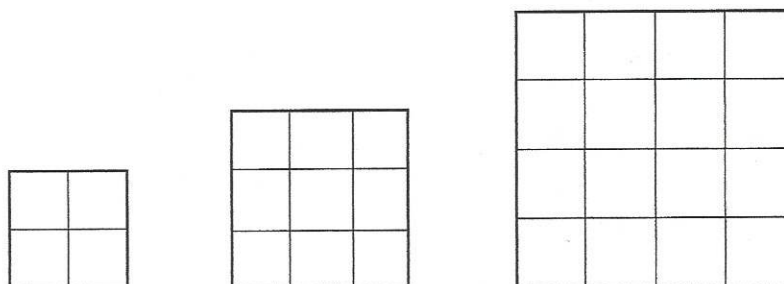


3. **HONOR STUDENTS** A local high school displays pictures of the honor students from each school year on the office wall. The top row has 9 pictures displayed. The next 3 rows have 7, 10, and 8 pictures displayed. The pattern continues to the bottom row, which has 14 pictures in it. How many rows of pictures are there on the office wall?

4. **EARNING MONEY** Penny is holding a car wash. The table shows what part of a car she can wash in $\frac{1}{4}$ hour. How many cars can she wash in 3 hours?

Time (h)	Cars Washed
$\frac{1}{4}$	$\frac{1}{3}$
$\frac{1}{2}$	$\frac{2}{3}$
$\frac{3}{4}$	1

5. **GEOMETRY** Find the perimeters of the next two figures in the pattern. The length of each side of each small square is 3 feet.



6. **HOT TUBS** A hot tub holds 520 gallons of water when it is full. A hose fills the tub at a rate of $6\frac{1}{2}$ gallons every five minutes. How long will it take to fill the hot tub?

Skills Practice**Compare Rational Numbers****Write each percent as a decimal.**

1. 50%

2. 13%

3. 2%

4. 41%

5. 79%

6. 0.9%

7. 17.5%

8. 33.4%

9. 91.5%

10. 122%

11. 282%

12. 331%

Write each decimal as a percent.

13. 0.6

14. 0.05

15. 0.17

16. 0.38

17. 0.081

18. 0.453

19. 0.572

20. 0.737

21. 0.061

22. 1.19

23. 1.4

24. 2.38

Write each fraction as a percent.

25. $\frac{9}{20}$

26. $\frac{2}{25}$

27. $\frac{5}{16}$

28. $\frac{33}{40}$

29. $\frac{3}{80}$

30. $\frac{5}{9}$

31. $\frac{3}{11}$

32. $\frac{59}{80}$

33. $\frac{14}{10}$

34. $\frac{28}{25}$

35. $\frac{5}{3}$

36. $\frac{33}{20}$

Skills Practice**Algebra: The Percent Proportion and Equation**

Solve each problem using a percent proportion.

- 1 is what percent of 5?
- What number is 25% of 40?
- 30 is 60% of what number?
- What percent of 8 is 6?
- Find 15% of 20.
- 33 is 33% of what number?
- 15 is what percent of 150?
- What number is 30% of 140?
- 90 is 60% of what number?
- What percent of 60 is 42?
- Find 90% of 40.
- 21 is 35% of what number?

Solve each problem using a percent equation.

- Find 50% of 40.
- What is 90% of 20?
- What percent of 64 is 16?
- 24 is what percent of 30?
- Find 20% of 55.
- What is 60% of 45?
- 16 is 40% of what number?
- 70% of what number is 63?
- What percent of 84 is 63?
- 9 is what percent of 30?
- 35 is 10% of what number?
- 15% of what number is 24?