

EXERCISES

? For more practice, see *Extra Practice*.

A Practice by Example

Is the first number divisible by the second? Explain.

Example 1
(page 141)

- | | | |
|-------------------|-------------------|--------------------|
| 1. 571 by 2 | 2. 5,605 by 10 | 3. 3,650 by 5 |
| 4. 3,179,144 by 4 | 5. 82,240 by 8 | 6. 6,722,540 by 10 |
| 7. 6,790 by 2 | 8. 3,491,660 by 4 | 9. 110,344 by 8 |

Example 2
(page 142)

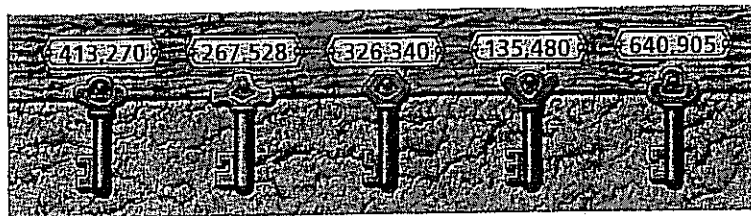
- | | | |
|----------------|--------------------|--------------------|
| 10. 558 by 3 | 11. 675 by 9 | 12. 8,394 by 3 |
| 13. 2,472 by 9 | 14. 7,623,540 by 3 | 15. 7,623,540 by 9 |

Example 3
(page 142)

16. **Fashion** You direct marketing for a fashion magazine. To distinguish your magazine from others, you identify it with a four-digit code. The number formed by the last three digits of the code is divisible by the first digit. Determine whether each number can be used.

- a. 4,956 b. 5,625 c. 9,585 d. 3,173

17. **Games** In an adventure game you must correctly place three colored keys into a door to gain access to a treasure room. Each key has a number etched into it. Use the clues to find the correct keys to use.



- The top lock uses a key that is divisible by 3 and 4, but not 5.
- The middle lock uses a key that is divisible by 2 and 5, but not 3.
- The bottom lock uses a key that is divisible by 3 and 5, but not 4.

B Apply Your Skills

Tell whether each number is divisible by 2, 3, 4, 5, 8, 9, or 10. Some numbers may be divisible by more than one number.

- | | | | | |
|-----------|------------|---------|-----------|-----------|
| 18. 324 | 19. 150 | 20. 840 | 21. 2,724 | 22. 1,430 |
| 23. 6,720 | 24. 81,816 | 25. 625 | 26. 7,848 | 27. 4,725 |

28. **Shipping** A company wants to ship 63,720 model airplanes. The size of a shipping carton is measured by the number of models it holds. Each carton must hold more than 3 but less than 10 models. Which sizes can the company use? How many cartons are needed for each size?

29. Refer to these numbers: 10 66 898 975 4,710
- Which are divisible by both 2 and 3?
 - Which are divisible by 6?
 - Using your results, write a divisibility test for 6.

30. **Writing in Math** Write divisibility tests for 12 and 15.

