

2.1

Divisibility Rules for 2, 5, and 10

A bank teller has only \$2 coins and \$5 and \$10 bills in her till.



Warm Up

Aarti said that if a whole number ends in 5, and you divide it by 5, your answer is always an odd number. Do you agree? Give examples to support your opinion.

Concept Development



- For which of these amounts can the teller give exact change, using only one kind of money, a \$2 coin, a \$5 bill, or a \$10 bill? Explain.
 a) \$32 b) \$40 c) \$560
 d) \$65 e) \$345 f) \$3005
- For which of these amounts could you make change using only \$2 coins? Explain.
 a) \$270 b) \$372 c) \$484
 d) \$1566 e) \$2058 f) \$3059
- A number is **divisible** by another number if there is no remainder when you divide.
 a) Do the numbers that are divisible by 2 only end in 0, 2, 4, 6, or 8?
 b) Is it necessary to check the other digits? Why or why not?
- For which amounts could you make change using only \$10 bills? Explain.
 a) \$970 b) \$205 c) \$1644 d) \$4350
- Do the numbers that are divisible by 10 only end in 0?
- a) For which amounts in Problem 4 could you make change using only \$5 bills?
 b) Do the numbers that are divisible by 5 only end in 0 or 5?
- A number is divisible by 2 and 5. What is the ones digit?
- An amount of money has a ones digit of zero. How much will be left over if you change it for \$2 coins? \$5 bills? \$10 bills?

Understand and Apply

- What is the ones digit of a number if it is
 a) 2 more than a multiple of 5?
 b) 1 more than a multiple of 2?
 c) 6 more than a multiple of 10?
- A bag of marbles can be evenly divided among 2, 5, or 10 friends. What is the smallest number of marbles the bag can contain?