REVIEW: Divisibility Tests

Name _____

Key Concept and Vocabulary

A whole number is divisible by

    2: if its last digit is 0, 2, 4, 6, or 8.

    3: if the sum of the digits is divisible by 3.

    4: if the number formed by the last two digits is divisible by 4.

    5: if its last digit is 0 or 5.

    6: if it is divisible by 2 and by 3.

    9: if the sum of its digits is divisible by 9.

Divisibility Tests

Skill Examples

1. 147 is divisible by 3 because $1 + 4 + 7 = 12$ is divisible by 3.

2. 524 is divisible by 4 because 24 is divisible by 4.

3. 243 is divisible by 9 because $2 + 4 + 3 = 9$ is divisible by 9.

Application Example

4. There are 9 students in your class. Can you divide 839 stamps evenly, so that each student in your class gets the same number of stamps?

The sum of the digits of 839 is $8 + 3 + 9 = 20$. 20 is not divisible by 9.
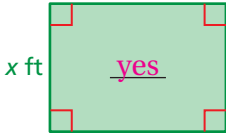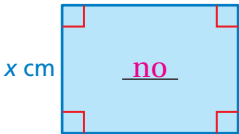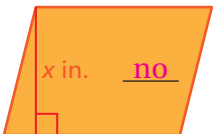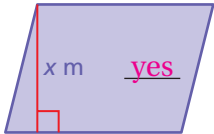
  No, you cannot divide the stamps evenly.

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Check your answers at BigIdeasMath.com.

Use a divisibility test to answer the question.

5. Is 146 divisible by 2? __yes__ **6.** Is 153 divisible by 3? __yes__ **7.** Is 378 divisible by 4? __no__

8. Is 1255 divisible by 5? __yes__ **9.** Is 147 divisible by 6? __no__ **10.** Is 333 divisible by 6? __no__

11. Is 2769 divisible by 3? __yes__ **12.** Is 5034 divisible by 3? __yes__ **13.** Is 145 divisible by 15? __no__

Decide whether x is a whole number. (Figures are not drawn to scale.)

14.
x ft __yes__
3 ft
Area = 87 ft^2

15.
x cm __no__
9 cm
Area = 343 cm^2

16.
x in. __no__
6 in.
Area = 256 in.^{2}

17.
x m __yes__
4 m
Area = 144 m^2

18. SHARING TIME There are 360 minutes of monthly cell phone minutes for 4 people in a family. Can each person get the same number of minutes per month? If so, how many?

  yes; 90 minutes

19. CALENDAR Assume that there are 365 days in a year. Describe the possible number of days in a week so that there is an exact number of weeks in a year. *(Hint: 7 is not one of them.)*

There can be 73 weeks with 5 days in a week or 5 weeks with 73 days in a week.