

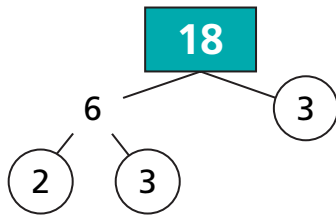
# Writing a Number as the Product of Prime Factors

NCTM Standards 1, 2, 6, 8, 10

For each problem:

- Draw one factor tree and circle the prime factors.
- Draw a different factor tree by starting with two different factors.
- Write number sentences with the prime factors.
- What do you notice?

1



$$18 = 2 \times 3 \times 3$$



$$18 = \underline{\hspace{2cm}}$$

2

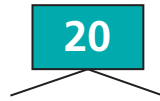


$$12 = \underline{\hspace{2cm}}$$

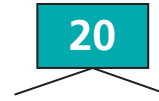


$$12 = \underline{\hspace{2cm}}$$

3



$$20 = \underline{\hspace{2cm}}$$



$$20 = \underline{\hspace{2cm}}$$



- 4 For Problem 3, how do the two number sentences you wrote for 20 compare?

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For each problem:

A. Draw a factor tree and circle the prime factors.

B. Write a number sentence with the prime factors.

5

14

14 = \_\_\_\_\_

6

45

45 = \_\_\_\_\_

7

24

24 = \_\_\_\_\_

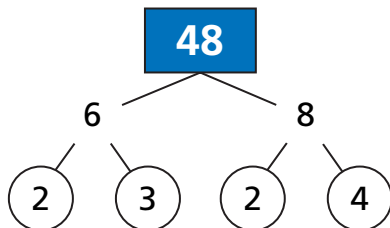
8

100

100 = \_\_\_\_\_



9 Whitney made this factor tree for 48. Describe and correct her error.



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

10 **Challenge** Fill in the trees in different ways. Prime factors must be in the circles.

