

Learning Objective: Students will be able to use Euclid's Ladder to find greatest common factors of two numbers.

Warm Up

$$\begin{array}{r} 70 \\ \times 11 \\ \hline \end{array}$$

$$\begin{array}{r} 35 \\ \times 52 \\ \hline \end{array}$$

$$\begin{array}{r} 41 \\ \times 41 \\ \hline \end{array}$$

$$\begin{array}{r} 74 \\ \times 26 \\ \hline \end{array}$$

$$\begin{array}{r} 42 \\ \times 93 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ \times 42 \\ \hline \end{array}$$

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Warm Up Answers

$$\begin{array}{r} 70 \\ \times 11 \\ \hline 70 \\ 700 \\ \hline 770 \end{array}$$

$$\begin{array}{r} 35 \\ \times 52 \\ \hline 70 \\ 1,750 \\ \hline 1,820 \end{array}$$

$$\begin{array}{r} 41 \\ \times 41 \\ \hline 41 \\ 1,640 \\ \hline 1,681 \end{array}$$

$$\begin{array}{r} 74 \\ \times 26 \\ \hline 444 \\ 1,480 \\ \hline 1,924 \end{array}$$

$$\begin{array}{r} 42 \\ \times 93 \\ \hline 126 \\ 3,780 \\ \hline 3,906 \end{array}$$

$$\begin{array}{r} 54 \\ \times 42 \\ \hline 108 \\ 2,160 \\ \hline 2,268 \end{array}$$

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Homework Answers

1.4 Record and Practice Journal

List the factor pairs of the number.

1. 6

$$1 \cdot 6, 2 \cdot 3$$

2. 7

$$1 \cdot 7$$

3. 10

$$1 \cdot 10, 2 \cdot 5$$

4. 16

$$1 \cdot 16, 2 \cdot 8, \\ 4 \cdot 4$$

5. 35

$$1 \cdot 35, 5 \cdot 7$$

6. 55

$$1 \cdot 55, 5 \cdot 11$$

Write the prime factorization of the number.

7. 9

$$3^2$$

8. 24

$$2^3 \cdot 3$$

9. 40

$$2^3 \cdot 5$$

10. 44

$$2^2 \cdot 11$$

11. 50

$$2 \cdot 5^2$$

12. 65

$$5 \cdot 13$$

13. A fitness instructor arranges 30 people into rows. Each row has the same number of people.

a. Can the instructor arrange the people into rows of 6?

yes

b. Can the instructor arrange the people into rows of 9?

no

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Lesson 1.5

September 27, 2016

Essential Question:

How can you find the greatest common factor of two numbers?

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use Euclid's Ladder to find greatest common factors of two numbers.

Self-Evaluation Scale

Score	Description
4	I can teach other students how to use Euclid's Ladder to find greatest common factors of two numbers.
3	I can use Euclid's Ladder to find greatest common factors of two numbers.
2	I recognize, but still need help to use Euclid's Ladder to find greatest common factors of two numbers.
1	I do not know how to use Euclid's Ladder to find greatest common factors of two numbers.

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Euclid



also known as Euclid of Alexandria, was a Greek mathematician, often referred to as the "Father of Geometry".

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Euclid's Ladder

12 20

14 35

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On Your Own

$$\begin{array}{r} | 12 \quad 30 \\ \hline \end{array}$$

$$\begin{array}{r} | 32 \quad 54 \\ \hline \end{array}$$

$$\begin{array}{r} | 24 \quad 108 \\ \hline \end{array}$$

$$\begin{array}{r} | 51 \quad 85 \\ \hline \end{array}$$

$$\begin{array}{r} | 14 \quad 84 \\ \hline \end{array}$$

$$\begin{array}{r} | 39 \quad 66 \\ \hline \end{array}$$

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Assignment

Complete problems 13, 15, 16, 23, 25, 26, 31, & 33
on pages 34 & 35 in your Big Ideas Text Book.

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Homework

In your Big Ideas Record and Practice Journal
page 22.