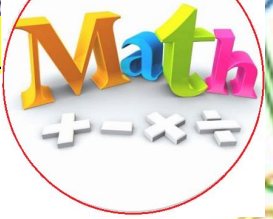


Name: \_\_\_\_\_

Section: \_\_\_\_\_



**WRITE YOUR NAME  
OR NO GRADE!!!**

### Homework

This week we will be finishing multiplication and begin with division.

**Homework is due on MONDAY November 13**

### Reminders

Please remember that homework is just a reinforcement of what we do in class. When a scholar completes homework, they are retaining the information. A scholar who does not complete the homework is more likely to forget what was learned in class.

### Notes

- Homework is graded for completion. **However, students must show their work.** Students will lose 50% of the points if they turn in homework showing no work, even if the answers are present.
- **I will not accept homework more than four days late.** If the homework is **due on Monday**, the last day to turn it in will be **Friday**. Late homework will have points deducted. Homework will be graded as follows:
  - o On time and complete/work shown: 100%
  - o One day late: deduct 11 %
  - o Two days late: deduct 21 %
  - o Three days late: deduct 31%
  - o Four days late: deduct 41%
  - o Five days or more late: Z

Please feel free to contact me with any questions or concerns at [natalie.roman@archimedean.org](mailto:natalie.roman@archimedean.org).

<input type="checkbox"/>	<u>Monday</u>	November 6	Find Common Factors
<input type="checkbox"/>	<u>Tuesday</u>	November 7	Divisibility
<input type="checkbox"/>	<u>Wednesday</u>	November 8	Prime and Composite
<input type="checkbox"/>	<u>Thursday</u>	November 9	Factors and Multiples
<input type="checkbox"/>	<u>Friday</u>	November 10	NONE

**SKILL**  
**S80****Find Common Factors****OBJECTIVE** Find the common factors of two numbers.

Factors are numbers that multiply to give a product.

**Common factors** are factors that two or more numbers share.

Find the common factors of 12 and 18.

<b>STEP 1</b> List the factors of 12.	1, _____, _____, _____, _____, 12
<b>STEP 2</b> List the factors of 18.	1, _____, _____, _____, _____, 18
<b>STEP 3</b> List the factors that 12 and 18 have in common.	_____, _____, _____, _____

**Try This!**

Find the common factors of the pair of numbers.

**1. 6 and 14**

Factors of 6:

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Factors of 14:

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Common Factors:

\_\_\_\_\_, \_\_\_\_\_

**2. 10 and 25**

Factors of 10:

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Factors of 25:

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Common Factors:

\_\_\_\_\_, \_\_\_\_\_

## Factors and Divisibility

A number is divisible by another number if the quotient is a counting number and the remainder is 0.

You can decide if a number is divisible by 2, 3, 5, 6, or 9 by using divisibility rules instead of dividing. Divisibility rules help you decide if one number is a factor of another.

**Is 39 divisible by 2, 3, 5, 6, or 9?**

### Divisibility Rules

$39 \div 2 = 19 \text{ r}1 \rightarrow$  39 is not divisible by 2.

The last digit, 9, is not even, so 39 is not divisible by 2.

$39 \div 3 = 13 \text{ r}0 \rightarrow$  39 is divisible by 3.

The sum of the digits,  $3 + 9 = 12$ , is divisible by 3, so 39 is divisible by 3.

$39 \div 5 = 7 \text{ r}4 \rightarrow$  39 is not divisible by 5.

The last digit, 9, is not a 0 or 5, so 39 is not divisible by 5.

$39 \div 6 = 6 \text{ r}3 \rightarrow$  39 is not divisible by 6.

39 is not divisible by both 2 and 3, so it is not divisible by 6.

$39 \div 9 = 4 \text{ r}3 \rightarrow$  39 is not divisible by 9.

The sum of the digits,  $3 + 9 = 12$ , is not divisible by 9, so 39 is not divisible by 9.

39 is divisible by 3.  
3 is a factor of 39.

**Tell whether 30 is divisible by 2, 3, 5, 6, or 9. Show your work.**

**1**  $30 \div 2$  \_\_\_\_\_

**2**  $30 \div 3$  \_\_\_\_\_

**3**  $30 \div 5$  \_\_\_\_\_

**4**  $30 \div 6$  \_\_\_\_\_

**5**  $30 \div 9$  \_\_\_\_\_

**Is 4 a factor of the number? Write yes or no.**

**6** 81  
\_\_\_\_\_

**7** 24  
\_\_\_\_\_

**8** 56  
\_\_\_\_\_

## Prime and Composite Numbers

A **prime number** is a whole number greater than 1 that has exactly two factors, 1 and the number itself.

A **composite number** is a whole number greater than 1 that has more than two factors.

You can use division to find the factors of a number and tell whether the number is prime or composite.

**Tell whether 55 is *prime* or *composite*.**

Use division to find all the numbers that divide into 55 without a remainder. Those numbers are the factors of 55.

$55 \div 1 = 55$ , so 1 and 55 are factors.

$55 \div 5 = 11$ , so 5 and 11 are factors.

The factors of 55 are 1, 5, 11, and 55.

Because 55 has more than two factors, 55 is a composite number.

**Tell whether 61 is *prime* or *composite*.**

Use division to find all the numbers that divide into 61 without a remainder. Those numbers are the factors of 61.

$61 \div 1 = 61$ , so 1 and 61 are factors.

There are no other numbers that divide into 61 evenly without a remainder.

The factors of 61 are 1 and 61.

Because 61 has exactly two factors, 61 is a prime number.

**Tell whether the number is *prime* or *composite*.**

**1** 44

Think: Is 44 divisible by any number other than 1 and 44?

**2** 53

Think: Does 53 have other factors besides 1 and itself?

**3** 12

**4** 50

**5** 24

**6** 67

**7** 83

**8** 27

**9** 34

**10** 78

## Factors and Multiples

You know that  $1 \times 10 = \underline{10}$  and  $2 \times 5 = \underline{10}$ .

So, 1, 2, 5, and 10 are all **factors** of 10.

You can skip count to find **multiples** of a number:

Count by 1s: 1, 2, 3, 4, 5, 6, 7, 8, 9, **10**, ...

Count by 2s: 2, 4, 6, 8, **10**, 12, ...

Count by 5s: 5, **10**, 15, 20, 25, ...

Count by 10s: **10**, 20, 30, 40, ...

Note that **10** is a multiple of 1, 2, 5, and 10. A number is a multiple of all of its factors.

A **common multiple** is a multiple of two or more numbers. So, 10 is a common multiple of 1, 2, 5, and 10.

**1** Multiply to list the next five multiples of 3.

3, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

**2** Multiply to list the next five multiples of 7.

7, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Is the number a factor of 8? Write yes or no.

**3** 2

\_\_\_\_\_

**4** 8

\_\_\_\_\_

**5** 15

\_\_\_\_\_

**6** 20

\_\_\_\_\_

Is the number a multiple of 4? Write yes or no.

**7** 2

\_\_\_\_\_

**8** 12

\_\_\_\_\_

**9** 16

\_\_\_\_\_

**10** 18

\_\_\_\_\_