

## Lesson 6: Factors • Divisibility

\_\_\_\_\_ : the whole numbers that divide the number without a remainder

*Ex 1: List the whole numbers that are factors of 12.*

*Ex 2: List the factors of 51.*

What are two ways the **Greatest Common Factor** can be found?

*Ex 3: Find the greatest common factor of 18 and 30.*

| DIVISIBILITY RULES |                             |
|--------------------|-----------------------------|
| Divisible by?      | The trick!                  |
| 2                  | last digit 0, 2, 4, 6, 8?   |
| 3                  | sum of digits ÷ 3?          |
| 4                  | last 2 digits ÷ 4?          |
| 5                  | last digit 0 or 5?          |
| 6                  | √2 rule <b>and</b> √3 rule? |
| 8                  | last 3 digits ÷ 8?          |
| 9                  | sum of digits ÷ 9?          |
| 10                 | last digit 0?               |

*Ex 4: Which whole numbers from 1 to 10 are divisors of 9060?*

## Lesson 7: Lines and Angles

\_\_\_\_\_ : includes three dimensions—length, width, and depth

\_\_\_\_\_ : flat, two-dimensional surface with only length and width

\_\_\_\_\_ : one-dimensional with only length

- Contains an infinite number of points
- Write the name of this line using symbols.



\_\_\_\_\_ : an exact, unmeasurably small location in space

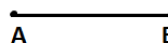
\_\_\_\_\_ : part of a line with one endpoint

Write the name of this ray using symbols.

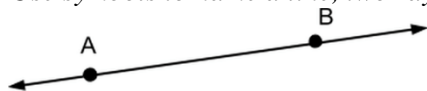


\_\_\_\_\_ : part of a line with two endpoints

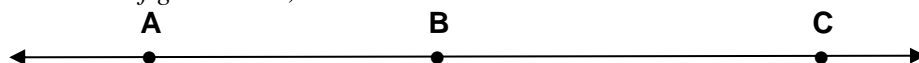
Write the name of this segment using symbols.



*Ex 1: Use symbols to name a line, two rays, and a segment in the figure below.*



*Ex 2: In the figure below, AB is 3cm and AC is 7cm. Find BC.*



Planes

Draw the following:

Parallel lines

Oblique lines

Perpendicular lines

Angles

**Angle:** formed by two \_\_\_\_\_ that have a common endpoint

Draw the following and specify the angle:

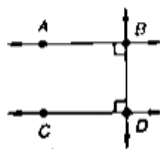
Right angle

Acute Angle

Straight Angle

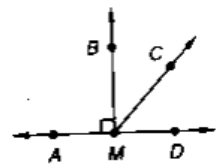
Obtuse Angle

Ex 3: Which line is parallel to line AB?



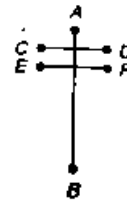
Ex 4: There are several angles in this figure.

- Name the straight angle.
- Name the obtuse angle.
- Name two right angles.
- Name two acute angles.



Ex 5: A power pole with two cross pieces can be represented by three segments.

- Name a vertical segment.
- Name a horizontal segment. \_\_\_\_\_
- Name a segment perpendicular to CD.



## Lesson 8: Fractions and Percents • Inch Ruler

What are fractions and percents commonly used for?

Ex 1: Name the shaded part of the circle as a fraction and as a percent.

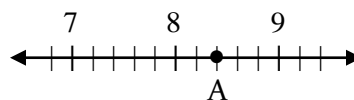


Ex 2: Which of the following could describe the portion of this rectangle that is shaded?

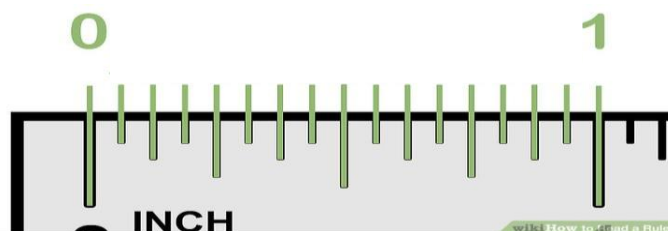
- $\frac{1}{2}$
- 40%
- 60%



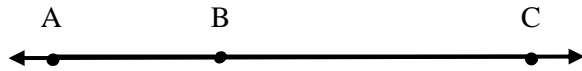
Ex 3: Point A represents what mixed number on this number line?



Fill in each line of the ruler with the reduced fractions.



Ex 4: Use an inch ruler to find AB, BC, and AC to the nearest sixteenth of an inch.



## Lesson 11: Problems About Combining • Problems About Separating

*\*Word problems have been slightly altered from textbook examples. They are not intended to be factual.\**

### Steps to Solve a Story Problem:

1. Read the problem and identify its pattern
2. Write an equation for the given information
3. Solve and check the equation.
4. Review the question and write the answer.

### Combining

What is the addition pattern for problems about combining?

Ex 1: At the beginning of the sixth plague, an Egyptian counted 47 boils. At the end, he counted 114 boils. How many new boils did he get after he initially counted?

Ex 2: When the Egyptians went after the Israelites, the first group of chariots and charioteers followed the Israelites into the parted Red Sea. A second group of 137 chariots and charioteers stopped near the bank as the water collapsed on their companions. There were 312 total chariots and charioteers. How many were in the first group?

### Separating

What is the subtraction pattern for problems about separating?

Ex 3: The Israelites picked up 4 dozen pieces of manna in the morning. When it came time for supper, only 32 pieces remained. How many pieces of manna did they eat for lunch?

Ex 4: The Egyptian's field was full of cattle before the fifth plague. When the plague struck, 56 of his cattle died. Only 88 cattle remained. How many cattle were in the field before the plague struck?