Problem of the Day

Find the next three terms in this number pattern and describe the pattern.
3.75, 3.81, 3.87, 3.93, . . .

3.99, 4.05, 4.11; Start with 3.75 and add 0.06 repeatedly.

What You Learned

In Chapter 6, you estimated measurements in the customary system.

You also converted units of measure within the customary system.

In Chapter 8, you identified and classified angles and two-dimensional figures.

What You'll Learn

In this chapter, you will use the metric system of measurement and convert units of measure within the metric system.

You will use formulas to find the circumference and area of a circle.

You will find the perimeters and areas of parallelograms and triangles.

You will identify three-dimensional figures and find their surface areas and volumes.

Materials:

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What You'll Learn

In Lesson 9-1 you will learn to use the units of measure and to choose appropriate units of length, mass, and capacity.

Why Learn This?

The metric system of measurement is a decimal system. Computing with decimals is easier than other systems. The metric system uses prefixes to indicate the size of metric units.

Metric System – a system of measurement using the decimal system.

Meter – a standard unit of length in the metric system.

Mass – the measure of the amount of matter in an object.

Gram – is the standard unit of mass.

Capacity – is the measure of the amount of space an object contains.

Liter – The standard unit of capacity.

Kilo – 1,000

Centi – 1/100 or 0.01

Milli – 1/1,000 or 0.001

Check Skills You'll Need

(For help, go to Lesson 6-6.)

1. Vocabulary Review Name a *customary unit of measure* for length, weight, and capacity. Answers may vary. Sample: ft, lb, fl oz

Name an appropriate unit for each measurement.

2. the length of a gymnasium

The unit "miles" is too large and "inches" is too small; use feet or yards.

3. the capacity of a juice box

The unit "quart" is too large; use fluid ounce, cups, or pints.

Check Skills You'll Need

Additional Examples

1 EXAMPLE Choose an appropriate metric unit of length for a classroom.

A classroom is much shorter than a kilometer but longer than a millimeter.

The most appropriate unit of measure is meters.

Quick Check

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Additional Examples

2 EXAMPLE Choose an appropriate metric unit of mass.

a. a sewing needle

The mass of a sewing needle is much less than the mass of a paperclip.

The appropriate unit of measure is milligrams.

b. a compact disc

The mass of a compact disc is much greater than the mass of an eyelash.

The appropriate unit of measure is grams.

Quick Check

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Additional Examples

3 EXAMPLE Choose an appropriate metric unit of capacity.

a. a kitchen sink

The capacity of a kitchen sink is much less than the capacity of 2 or 3 bathtubs.

The appropriate unit of measure is liters.

b. a shampoo bottle

The capacity of a shampoo bottle is less than the capacity of a bottle of juice.

The appropriate unit of measure is milliliters.

Quick Check

Have Students name the metric units of length, mass, and capacity in this lesson and give an example of an object they would measure using each unit.

Units of Length:
meter, kilometer, centimeter, millimeter

Units of Mass:
gram, kilogram, centigram, milligram

Units of Capacity:
liter, kiloliter, centiliter, milliliter

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Lesson Quiz

Choose an appropriate metric unit of measure for each.

1. mass of a toothbrush
   gram

2. width of a soccer field
   meter

3. capacity of a baby's milk bottle
   milliliter

4. mass of an elephant
   kilogram

Work

Class work

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Homework

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