

Comparing Common Units of Distance

UOD 1

- 1 Put these common traditional units of distance in order from shortest to longest.

yard inch mile foot

_____ _____ _____ _____
shortest → longest

- 2 Put these common metric units of distance in order from shortest to longest.

kilometer centimeter millimeter meter

_____ _____ _____ _____
shortest → longest

- 3 Which metric unit is closest in length to a yard? _____

- 4 Is a meter longer than a yard? _____

- 5 Which metric unit is closest in length to a mile? _____

- 6 Is a kilometer longer than a mile? _____

- 7 Approximately how many kilometers are in 10 miles? _____

- 8 Which is longer, an inch or a centimeter? _____

- 9 Approximately how many centimeters are in an inch? _____

- 10 How many inches are in a foot? _____

- 11 How many feet are in a yard? _____

Choosing the 'Best' Metric Unit

UOD 2

Instructions: For each problem below, decide which common metric unit you think would be best for measuring the object listed. You can write the whole word or just the abbreviation of that unit.

millimeters: mm

centimeters: cm

meters: m

kilometers: km

- 1 The length of a pencil cm
- 2 The diameter of a water tower _____
- 3 The length of a highway _____
- 4 The width of a fruit fly _____
- 5 The perimeter of a swimming pool _____
- 6 The radius of a bicycle tire _____
- 7 The distance between two cities _____
- 8 The thickness of a pancake _____
- 9 The depth of a lake _____
- 10 The length of a bee's wing _____
- 11 The height of a building _____
- 12 The diameter of a cake _____

Choosing the 'Best' Traditional Unit

UOD 3

Instructions: For each problem below, decide which common traditional unit you think would be best for measuring the object listed. You can write the whole word or just the abbreviation of that unit.

inches: in

feet: ft

yards: yd

miles: mi

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|-----------|----------------------------------|-----------|
| 1 | The length of a hot dog | <u>in</u> |
| 2 | The depth of a swimming pool | _____ |
| 3 | The diameter of a basketball | _____ |
| 4 | The length of a basketball court | _____ |
| 5 | The distance across an ocean | _____ |
| 6 | The width of a bedroom | _____ |
| 7 | The width of an envelope | _____ |
| 8 | The length of playground | _____ |
| 9 | The height of a ladder | _____ |
| 10 | The height of California | _____ |
| 11 | The diameter of a pumpkin | _____ |
| 12 | The length of a boat | _____ |

Simple Metric Distance Conversions

UOD 4

Instructions: To answer the following questions, remember these simple metric relationships you learned in the video lesson.

1 kilometer = 1,000 meters

1 meter = 100 centimeters

1 centimeter = 10 millimeters

Hint: If you are converting from a bigger unit to a smaller one (i.e. km to m) you will need to multiply, but if you are converting from a smaller unit to a bigger one (i.e. cm to m) you will need to divide.

- 1** How many meters are equivalent to 2 kilometer?

since: $1 \text{ km} = 1,000 \text{ m}$
 $\times 2 \quad \times 2$

then: $2 \text{ km} = 2,000 \text{ m}$

- 2** How many centimeters are equivalent to 50 millimeters?

since: $1 \text{ cm} = 10 \text{ mm}$
we need to divide our 50 mm
into groups of 10

$50 \text{ mm} \div 10 = 5 \text{ cm}$

- 3** How many millimeters are equivalent to 8 centimeters?

- 4** How many kilometers are equivalent to 3,000 meters?

- 5** How many centimeters are equivalent to 12 meters?

- 6** How many meters are equivalent to 400 centimeters?

- 7** How many meters are equivalent to 7 kilometer?

- 8** How many centimeters are equivalent to 60 millimeters?

- 9** How many centimeters are equivalent to 2.5 meters?

- 10** How many kilometers are equivalent to 1,500 meters?

Simple Traditional Distance Conversions

UOD 5

Instructions: To answer the following questions, remember these simple traditional distance relationships you learned in the video lesson.

$$1 \text{ mile} = 1,760 \text{ yards}$$

$$1 \text{ yard} = 3 \text{ feet}$$

$$1 \text{ foot} = 12 \text{ inches}$$

Hint: If you are converting from a bigger unit to a smaller one (i.e. ft to in) you will need to multiply, but if you are converting from a smaller unit to a bigger one (i.e. ft to yd) you will need to divide.

- 1** How many inches are equivalent to 3 feet?

$$\text{since: } 1 \text{ ft} = 12 \text{ in} \\ \times 3 \quad \times 3$$

$$\text{then: } 3 \text{ ft} = 36 \text{ in}$$

- 2** How many yards are equivalent to 12 feet?

$$\text{since: } 1 \text{ yd} = 3 \text{ ft} \\ \text{we need to divide our 12 ft} \\ \text{by 3 to see how many yards that is}$$

$$12 \text{ ft} \div 3 = 4 \text{ yd}$$

- 3** How many feet are equivalent to 3 yards?

- 4** How many feet are equivalent to 24 inches?

- 5** How many yards are equivalent to 2 miles?

- 6** How many yards are equivalent to 30 feet?

- 7** How many inches are equivalent to 4 feet?

- 8** How many feet are equivalent to 60 inches?

- 9** How many inches are equivalent to 1.5 feet?

- 10** How many feet are equivalent to 6 inches?

Estimating Distance Conversions

UOD 6

Instructions: To answer the following questions, remember these estimated conversions between metric and traditional units.

10 miles \approx 16 kilometers

1 foot \approx 30 centimeters

1 inch \approx 2.5 centimeters

- 1** A pool is 4 feet deep. Estimate how many centimeters deep it is.

since: $1 \text{ ft} \approx 30 \text{ cm}$
 $\times 4 \quad \times 4$

then: $4 \text{ ft} \approx 120 \text{ cm}$

- 2** If you live 100 miles from the nearest big city, approximately how many kilometers is that?

- 3** If you have to travel 5 miles to school, about how many kilometers is that?

- 4** A tray is about 60 centimeters wide. What is its approximate width in feet?

- 5** If a drinking glass is 8 inches tall, what is its approximate height in centimeters?

- 6** If your friend is 5 feet tall, estimate their height in centimeters?

- 7** If the college you want to go to is 30 miles from your home, about how far is that in kilometers?

- 8** If a candle is 3 inches tall, about how many centimeters is that?

- 9** If your dog is 2.5 feet long, about how many centimeters long is it?

- 10** If your friend's hamster is 5 inches tall, about how many centimeters is that?