

Temperature Conversion Worksheet Answer Key PDF

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Part 1: Building a Foundation

Which of the following is the freezing point of water in Celsius?

undefined. A) 32°C

undefined. B) 0°C ✓

undefined. C) 100°C

undefined. D) 273.15°C

The freezing point of water in Celsius is 0°C.

Which of the following is the freezing point of water in Celsius?

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The freezing point of water in Celsius is 0°C.

Which of the following are temperature scales?

undefined. A) Fahrenheit ✓

undefined. B) Celsius ✓

undefined. C) Kelvin ✓

undefined. D) Newton

Fahrenheit, Celsius, and Kelvin are all temperature scales.

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undefined. **C) Kelvin ✓**

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Fahrenheit, Celsius, and Kelvin are all temperature scales.

Write the formula for converting Fahrenheit to Celsius.

The formula is $C = (F - 32) \times 5/9$.

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The formula is $C = (F - 32) \times 5/9$.

List the boiling point of water in Fahrenheit, Celsius, and Kelvin.

1. Boiling point in Fahrenheit

212°F

2. Boiling point in Celsius

100°C

3. Boiling point in Kelvin

373.15 K

The boiling point of water is 100°C, 212°F, and 373.15 K.

Part 2: Understanding and Interpretation

If the temperature is 68°F, what is the equivalent in Celsius?

undefined. A) 10°C

undefined. **B) 20°C ✓**

undefined. C) 30°C

undefined. D) 40°C

68°F is equivalent to approximately 20°C.

If the temperature is 68°F, what is the equivalent in Celsius?

undefined. A) 10°C

undefined. B) 20°C ✓

undefined. C) 30°C

undefined. D) 40°C

68°F is equivalent to approximately 20°C.

Which of the following statements are true about the Kelvin scale?

undefined. A) It starts at absolute zero. ✓

undefined. B) It is used in scientific experiments. ✓

undefined. C) 0 K is equivalent to -273.15°C. ✓

undefined. D) It is commonly used in weather forecasts.

The Kelvin scale starts at absolute zero and is used in scientific contexts.

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The Kelvin scale starts at absolute zero and is used in scientific contexts.

Explain why accurate temperature conversion is important in scientific experiments.

Accurate temperature conversion is crucial for reproducibility and validity of results.

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Part 3: Application and Analysis

A scientist measures a temperature of 310 K. What is this temperature in Celsius?

undefined. A) 36.85°C ✓

undefined. B) 37.85°C

undefined. C) 38.85°C

undefined. D) 39.85°C

310 K is equivalent to approximately 36.85°C.

A scientist measures a temperature of 310 K. What is this temperature in Celsius?

undefined. A) 36.85°C ✓

undefined. B) 37.85°C

undefined. C) 38.85°C

undefined. D) 39.85°C

310 K is equivalent to approximately 36.85°C.

You are baking a cake, and the recipe requires a temperature of 180°C. Which of the following are equivalent temperatures in Fahrenheit?

undefined. A) 356°F ✓

undefined. B) 350°F

undefined. C) 320°F

undefined. D) 212°F

180°C is equivalent to 356°F.

You are baking a cake, and the recipe requires a temperature of 180°C. Which of the following are equivalent temperatures in Fahrenheit?

undefined. A) 356°F ✓

undefined. B) 350°F

undefined. C) 320°F

undefined. D) 212°F

180°C is equivalent to 356°F.

Describe a real-world scenario where converting temperatures between Celsius and Fahrenheit is necessary.

Converting temperatures is necessary in cooking, weather reporting, and scientific research.

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Converting temperatures is necessary in cooking, weather reporting, and scientific research.

Analyze the following statements and select those that correctly describe the relationship between Celsius and Kelvin.

undefined. A) 1°C is equal to 1 K. ✓

undefined. B) The difference between freezing and boiling points of water is 100 units in both scales. ✓

undefined. C) Kelvin is always 273.15 units higher than Celsius. ✓

undefined. D) Kelvin is a more precise scale than Celsius.

1°C is equal to 1 K, and Kelvin is always 273.15 units higher than Celsius.

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undefined. A) 1°C is equal to 1 K. ✓

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1°C is equal to 1 K, and the difference between freezing and boiling points is 100 units in both scales.

Compare and contrast the Celsius and Fahrenheit scales in terms of their practical applications and historical origins.

Celsius is used globally and is based on the metric system, while Fahrenheit is primarily used in the U.S. and has historical roots in early thermometry.

Compare and contrast the Celsius and Fahrenheit scales in terms of their practical applications and historical origins.

Celsius is used in most countries for everyday temperature, while Fahrenheit is primarily used in the United States.

Part 4: Evaluation and Creation

Which temperature scale would be most appropriate for measuring extreme temperatures in space?

undefined. A) Celsius

undefined. B) Fahrenheit

undefined. C) Kelvin ✓

undefined. D) Rankine

The Kelvin scale is most appropriate for measuring extreme temperatures in space.

Which temperature scale would be most appropriate for measuring extreme temperatures in space?

undefined. A) Celsius

undefined. B) Fahrenheit

undefined. C) Kelvin ✓

undefined. D) Rankine

The Kelvin scale is most appropriate for measuring extreme temperatures in space.

Evaluate the following scenarios and determine which require precise temperature conversions.

undefined. A) Cooking a new recipe.

undefined. B) Conductin a chemical reaction. ✓

undefined. C) Reporting weather forecasts.

undefined. D) Designing a spacecraft. ✓

Conduct chemical reactions and designing spacecraft require precise temperature conversions.

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undefined. A) Cooking a new recipe. ✓

undefined. B) Conductin a chemical reaction. ✓

undefined. C) Reporting weather forecasts.

undefined. D) Designing a spacecraft. ✓

Cooking, conducting chemical reactions, and designing spacecraft require precise temperature conversions.

Propose a new temperature scale that could be used for a specific industry or scientific field. Describe its key features and advantages over existing scales.

A new temperature scale could be designed for specific industrial applications, focusing on precision and ease of use.

Propose a new temperature scale that could be used for a specific industry or scientific field. Describe its key features and advantages over existing scales.

A new temperature scale could be designed for the food industry, focusing on cooking precision.