MC

Which of these would be considered the most basic science?

Chemistry

\*Physics

Geology

Biology

MC

What is the first step in the scientific method?

Forming a hypothesis

Drawing conclusions

Testing predictions

\*Making an observation

MC

What is meant by a scientific model?

An accurate depiction of how things work in a specific situation

A testable hypothesis

\*A simplified representation of how things work

A guess made by a scientist based on their personal observations

MC

A scientific theory or law is

A proven fact

\*A testable hypothesis

A detailed observation

A random guess

MC

What is the standard units of measurement for distance in SI units?

\*Meters

Centimeters

Inches

Feet

MC

The metric system is based on powers of

Imagination

\*Ten

Eight

Two

MC

Physics deals with numbers that are

Always very large

Always very small

\*Both very large and very small numbers

MC

What is meant by a derived unit?

Units that are defined by the procedures used to measure them

\*Units expressed as a combination of other units

A specific unit used only in the SI system

Units of measurement requiring very accurate observations and measurements

MC

How is the meter currently defined in the SI system?

By the vibrations of the cesium atom

\*By the distance light travels in a tiny fraction of a second

By the length of a platinum-iridium bar kept near Paris

By the distance between one’s nose and the tips of their fingers

MC

We can convert between units using what method?

\*Dimensional analysis

Scientific notation

SI units

Scientific Method

MC

What does accuracy refer to in measurements?

The number of significant figures in a measurement

How close measurements are to each other

The range of possible values in a measurement

\*How close a measurement is to the true value

MC

Which of the following best describes precision?

\*How close measurements are to each other

The number of significant figures in a measurement

How close a measurement is to the true value

The range of possible values in a measurement

MC

What does an uncertainty of ±10 meters mean for a measurement of 250 meters?

The measurement is exactly 250 meters

The measurement is not accurate

\*The measurement could be between 240 and 260 meters

The measurement is not precise

MC

How is percent uncertainty calculated?

\*Error divided by the expected value, multiplied by 100

Error divided by the measured value, multiplied by 100

Expected value divided by the error, multiplied by 100

Measured value divided by the error, multiplied by 100

MC

Which of the following numbers has three significant figures?

0.0052

300

\*6.28 x 10^5

0.25

MC

How many significant figures are in the number 0.00052?

4

3

5

\*2

MC

Which rule applies to trailing zeros in a number which includes a decimal point?

\*They are always significant

They are never significant

They are significant only if they are between nonzero digits

MC

What is the result of 2.583 multiplied by 6.28 x 10^5, rounded to the correct number of significant figures?

1,622,124

\*1.62 x 10^6

1,600,000

1.622 x 10^6

MC

When adding 25.1, 41.5, and 16.31, to which decimal place should the final answer be rounded?

Hundredths place

\*Tenths place

Ones place

Thousandths place

MC

In the equation for the volume of a sphere, which part determines the number of significant figures in the final answer?

The power of 10

\*The measured radius

The value of 4/3

The value of pi