Standardized Test Prep

Test-Taking Tip

Using Formulas

Some test questions require you to use a formula to answer a question. For example, in the question below you should recall that speed can be found using the following formula.

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$

To solve for a quantity in a formula, substitute known values, including units, for the variables. Be sure to include units in your final answer.

Sample Question

An island on the Pacific plate moves a distance of 550 cm in 50 years. What is the plate's rate of speed?

A 44 cm per year
B 110 cm per year
C 2,750 cm per year
D 11 cm per year

Answer

The answer is **D**.

$$\frac{550 \text{ cm}}{50 \text{ years}} = 11 \text{ cm per year}$$

Choose the letter that best answers the question or completes the statement.

1. Which of the following is evidence for sea-floor spreading?
   A matching patterns of magnetic stripes in the ocean floor
   B volcanic eruptions along mid-ocean ridges
   C older rock found farther from mid-ocean ridges
   D all of the above

2. Wegener thought the continents moved because fossils of the same organisms are found on widely separated continents. Wegener's use of fossil evidence is an example of a(n)
   F prediction.
   G observation.
   H inference.
   J controlled experiment.

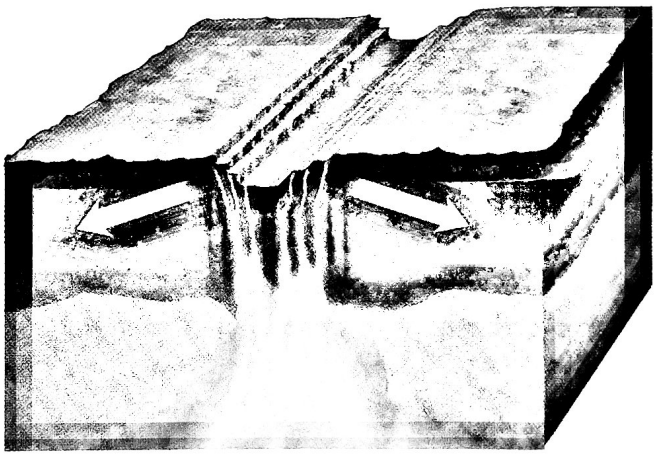
3. The table below shows the movement of rock away from a mid-ocean ridge, and the time in years it takes sea-floor spreading to move the rock that distance.

Distance (meters)	Time (years)
50	4,000
100	8,000
150	12,000

What is the speed of the rock?

A 0.0125 m per year
B 12.5 m per year
C 80 m per year
D 200,000 m per year

4. Which of the following best describes the process in the diagram below?
   F Converging plates form a transform boundary.
   G Converging plates form volcanoes.
   H Diverging plates form a mid-ocean ridge.
   J Diverging plates form a rift valley.



Constructed Response

5. Today, the Mediterranean Sea lies between Europe and Africa. But the African plate is moving toward the Eurasian plate at a rate of a few centimeters per year. Predict how this area will change in 100 million years. In your answer, first explain how the Mediterranean Sea will change. Then explain what will happen on land.