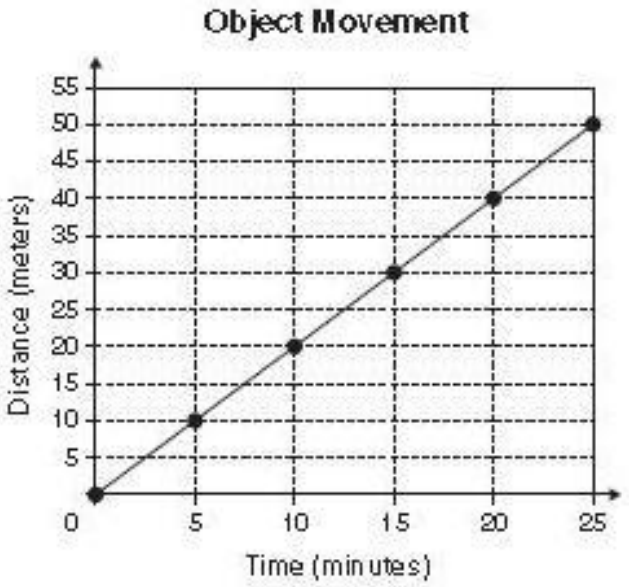
1 **The graph below shows the movement of an object at several points in time.**



What is the average speed of the object?

A $\frac{0.5 \text{ meters}}{\text{minute}}$

B $\frac{2 \text{ meters}}{\text{minute}}$

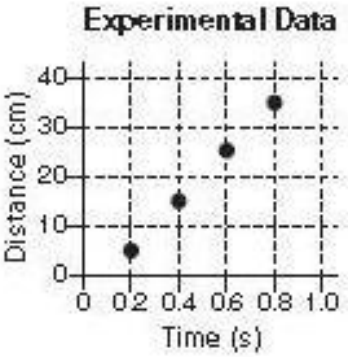
C $\frac{25 \text{ meters}}{\text{minute}}$

D $\frac{50 \text{ meters}}{\text{minute}}$

2 **Data from an experiment are presented below.**

Experimental Data

Distance	Time
5 cm	0.2 s
15 cm	0.4 s
25 cm	0.6 s
35 cm	0.8 s



The slope of the graph represents what characteristic of an object?

A displacement

B force

C speed

D inertia

3 **A spring scale is pulled downward and readings are recorded.**

Data Table

Distance Pulled	Spring Scale Reading
1.0 cm	4 N
1.5 cm	6 N
2.0 cm	8 N
2.5 cm	10 N

If the spring is pulled 3.5 cm, the spring scale should read

A 12 N.

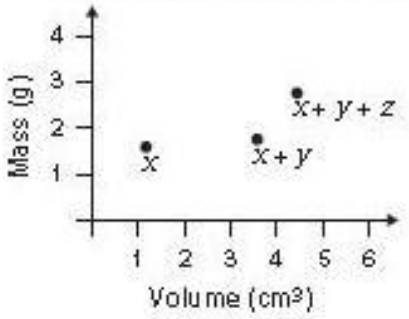
B 13 N.

C 14 N.

D 15 N.

4 **A student records the mass and volume of a lump of clay, x. Next, a second lump of clay, y, is added to lump x, and the combined $(x + y)$ mass and volume are recorded. Finally, a third lump of clay, z, is added to the combined $(x + y)$ mixture, and the final $(x + y + z)$ mass and volume are recorded, as shown below.**

Clay Transformation Graph



What is the *most* logical conclusion about the clay used in this investigation?

A Lump z had the greatest mass.

B Lump z had the lowest density.

C Lump y had the lowest density.

D Lump y had the greatest mass.

CSZ0075

5 **Red-clay bricks have a density of approximately $2000\ \frac{kg}{m^3}$. Air has a density of $1\ \frac{kg}{m^3}$. Which of the following has the lowest mass?**

A $2 m^3$ of bricks

B $4 m^3$ of bricks

C $6000 m^3$ of air

D $10{,}000 m^3$ of air

CSZ0090

6 **An athlete can run 9 kilometers in 1 hour. If the athlete runs at that same average speed for 30 minutes, how far will the athlete travel?**

A 18 kilometers

B 9 kilometers

C 4.5 kilometers

D 3.3 kilometers

CSZ0084

7 **How much time is required for a bicycle to travel a distance of 100 m at an average speed of $2\ \frac{m}{s}$?**

A 0.02 s

B 50 s

C 100 s

D 200 s

CSZ0040

8 **Which of the following represents the velocity of a moving object?**

A 40

B 40 m north

C $40\ \frac{m}{s}$

D $40\ \frac{m}{s}$ north

CSZ0088

Answers:

1. B

2. C

3. C

4. C

5. A

6. C

7. B

8. D