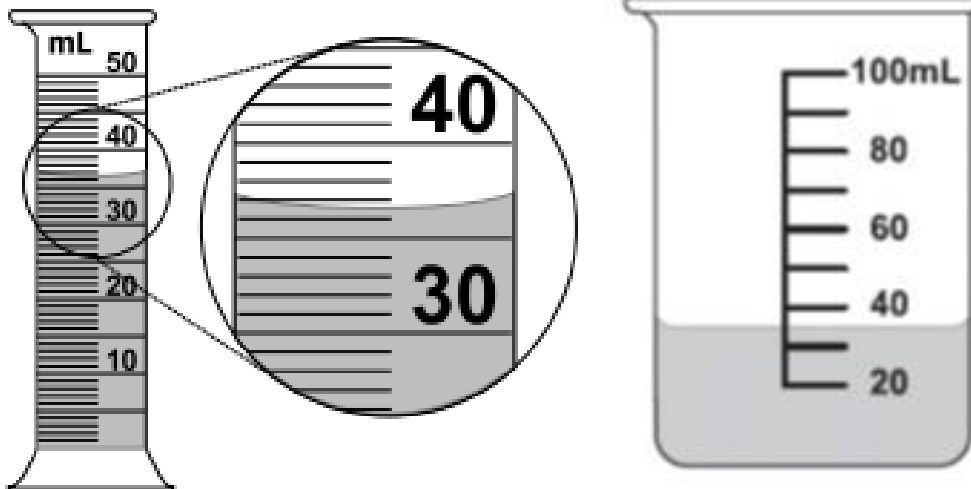


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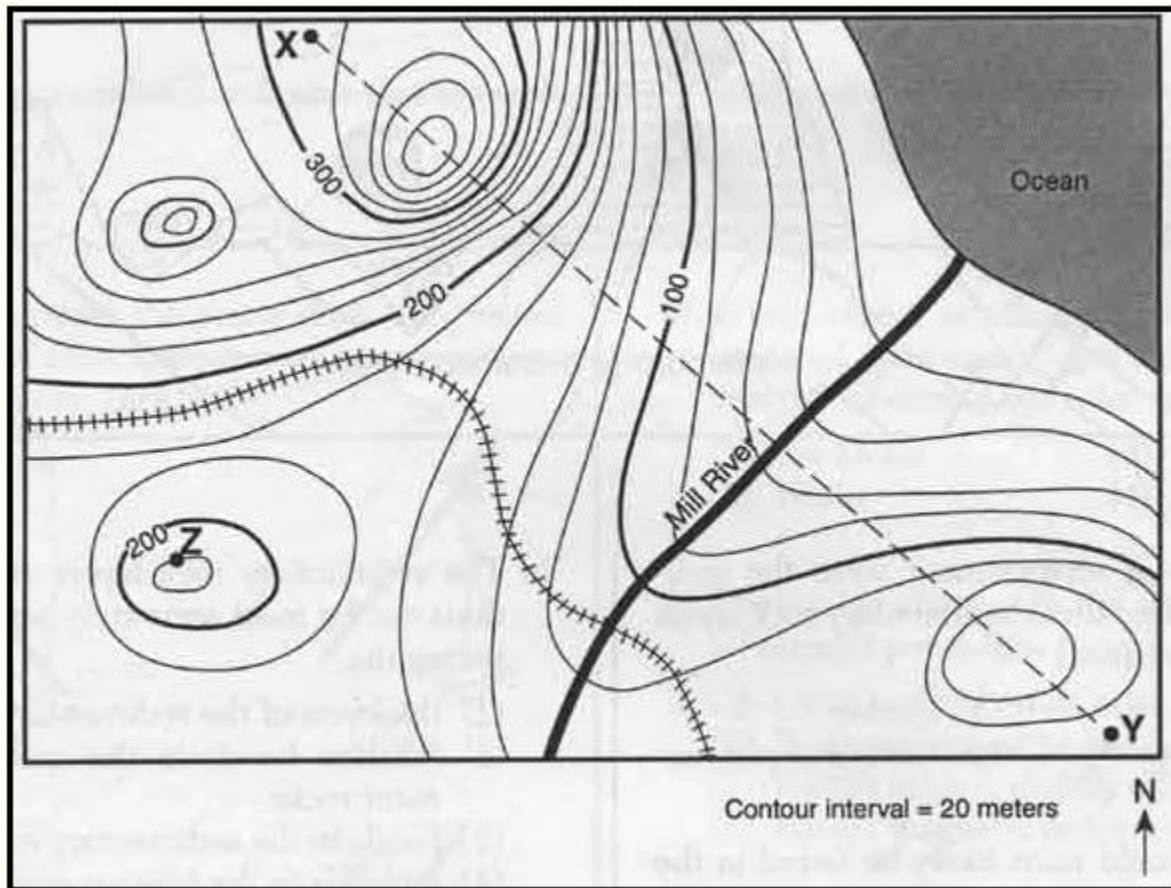
$$\text{density } (\rho) = \frac{\text{mass } (g)}{\text{Volume } (mL \text{ or } cm^3)}$$

Questions 1-2 refer to the graduated cylinder and beaker below.

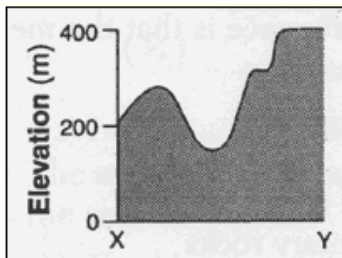


1. What volume does the graduated cylinder measure?
(A) 30 mL
(B) 36 mL
(C) 36.5 mL
(D) 36.50 mL
2. What volume does the beaker measure?
(A) 30 mL
(B) 35 mL
(C) 35.0 mL
(D) 35.00 mL
3. How are latitude and longitude lines drawn on a globe of Earth?
(A) Latitude lines are parallel and longitude lines meet at the poles.
(B) Latitude lines are parallel and longitude lines meet at the equator.
(C) Longitude lines are parallel and latitude lines meet at the poles.
(D) Longitude lines are parallel and latitude lines meet at the equator.
4. An airplane takes off from a location at 17°S latitude and flies to a new location 55° due north of its starting point. What latitude has the plane reached?
(A) 28°N
(B) 38°N
(C) 55°N
(D) 72°N

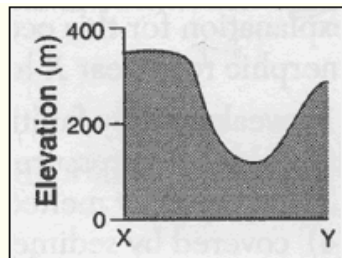
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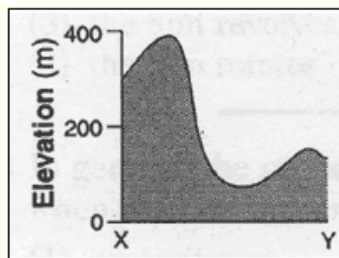
5. Which profile best represents the topography along the dashed line from point X to point Y according to the map above?



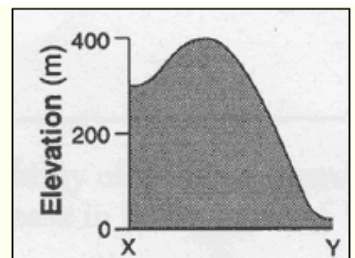
(A)



(B)

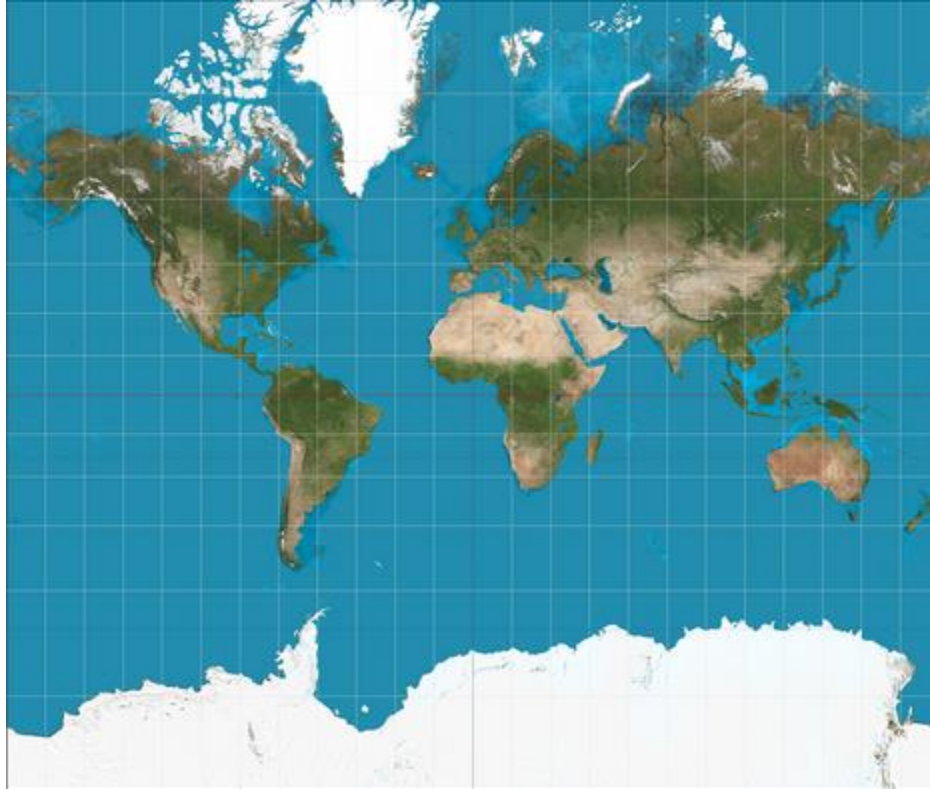


(C)



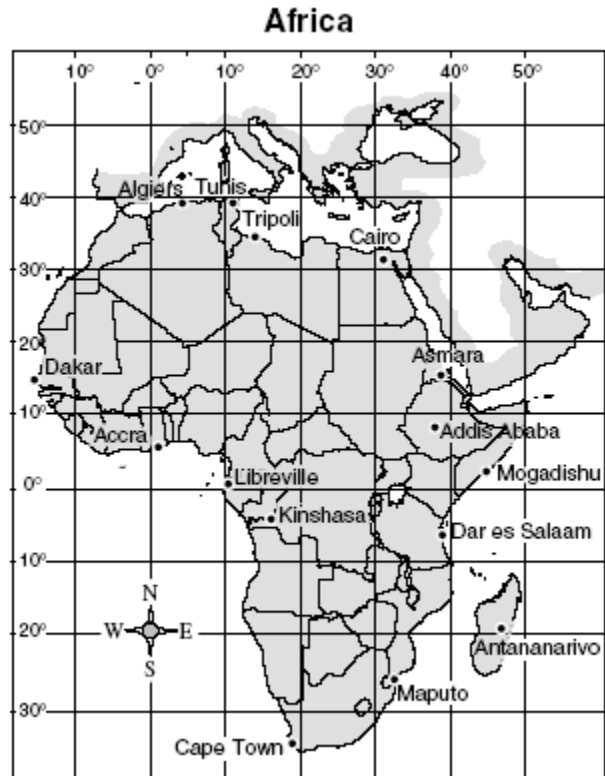
(D)

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6. The Mercator map shown above is a cylindrical projection map of the world. What are the advantages and limitations of this map model?
- (A) The distances shown on the map are very accurate at the equator but the primary limitation is that distances are extremely distorted the closer one gets towards the poles.
 - (B) The distances shown on the map are very accurate at the poles but the primary limitation is that distances are extremely distorted the closer one gets towards the equator.
 - (C) The distances shown on the map are very accurate at the equator but the primary limitation is that distances are extremely distorted the closer one gets towards the meridians.
 - (D) The distances shown on the map are very accurate at the poles but the primary limitation is that distances are extremely distorted the closer one gets towards the meridians.

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7. Which city in Africa is located closest to the place where the equator and the prime meridian meet on the map above?
- (A) Accra
 - (B) Mogadishu
 - (C) Dakar
 - (D) Libreville

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Questions 8-9 refer to a student's experiment of changing volume of a solution and measuring its mass.

Volume (mL)	Mass (g)
2.0	5.4
4.0	10.8
6.0	16.2
8.0	21.6
10.0	27.0

8. Which value is the independent variable in the experiment?
- (A) Volume
 - (B) Mass
 - (C) Solution
 - (D) Temperature
9. If you graph this data, what is the density of the solution by finding the slope?
- (A) 2.0 g/mL
 - (B) 2.4 g/mL
 - (C) 2.7 g/mL
 - (D) 3.3 g/mL
-
10. An object with a mass of 7.5 grams raises the water level of a graduated cylinder from 25.1 mL to 35.1 mL. What is the density of the object?
- (A) 0.25 g/mL
 - (B) 0.50 g/mL
 - (C) 0.75 g/mL
 - (D) 1.00 g/mL