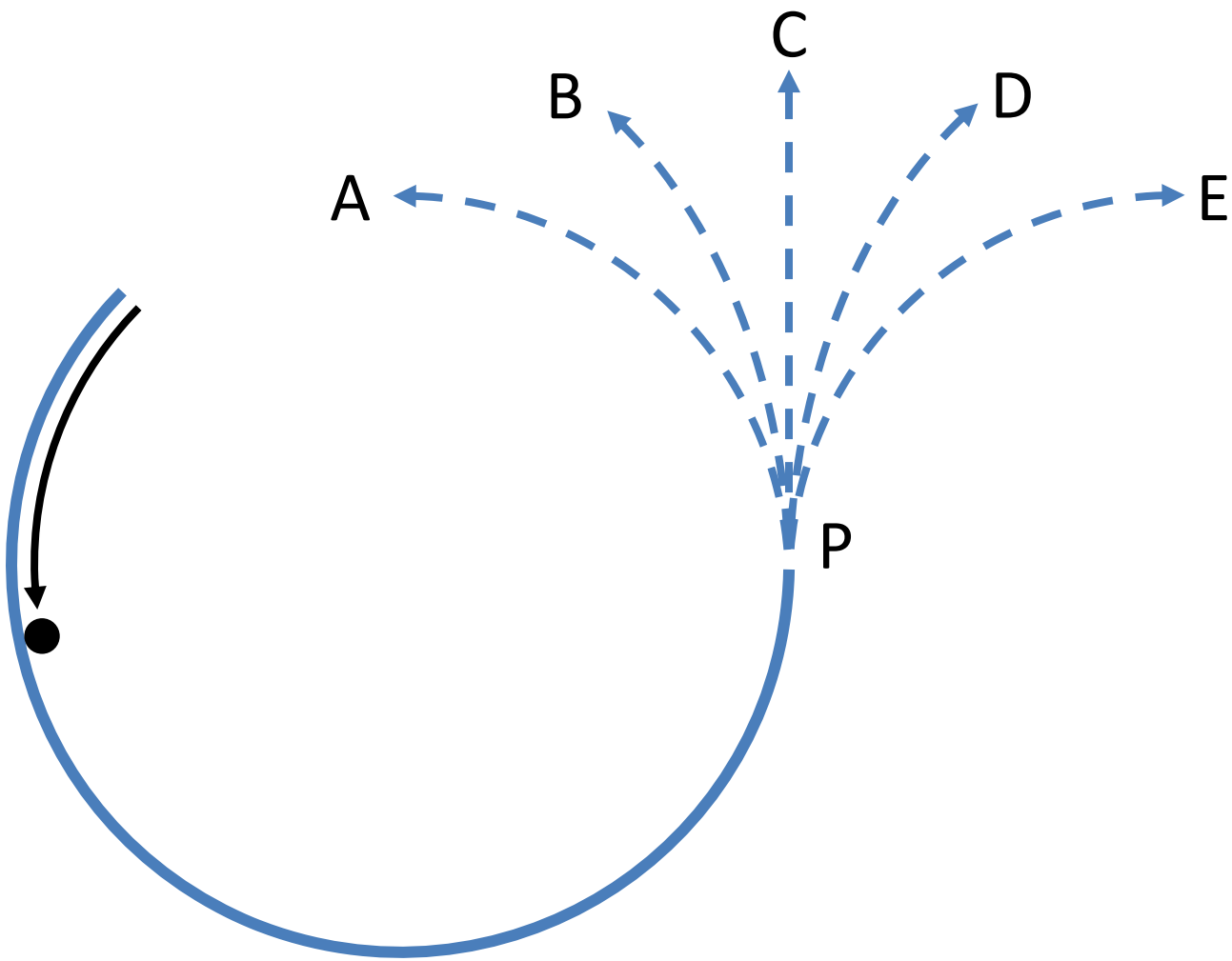
Example clicker questions

Clicker question

A ball is rolling around the inside of a circular track. The ball leaves the track at point P.

Which path does the ball follow?



(Mazur)

Clicker question

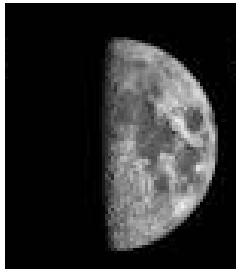
Suppose you pass white light through a prism and all of the colours of the spectrum are projected on a screen. If you then put a red filter over your eye and look at the spectrum, what colours do you see?

A) you see mostly red light; the blue and green disappears
B) you see mostly blue light; the other colours disappear
C) all of the colours turn red

(Duncan)

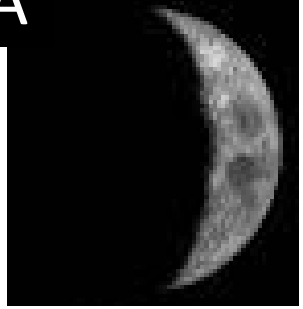
Clicker question

If this is the phase of the Moon when it rises:

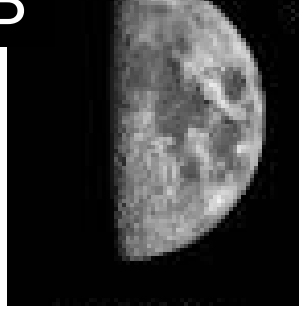


what is the phase of the Moon 12 hours later?

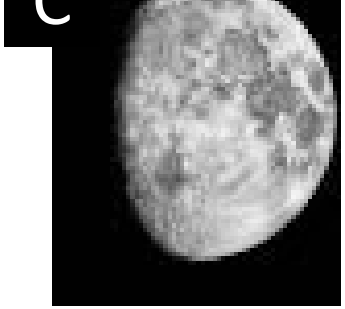
A



B

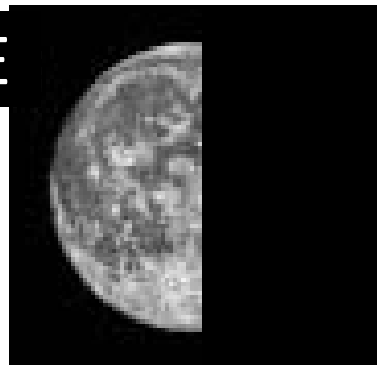


C



D

E

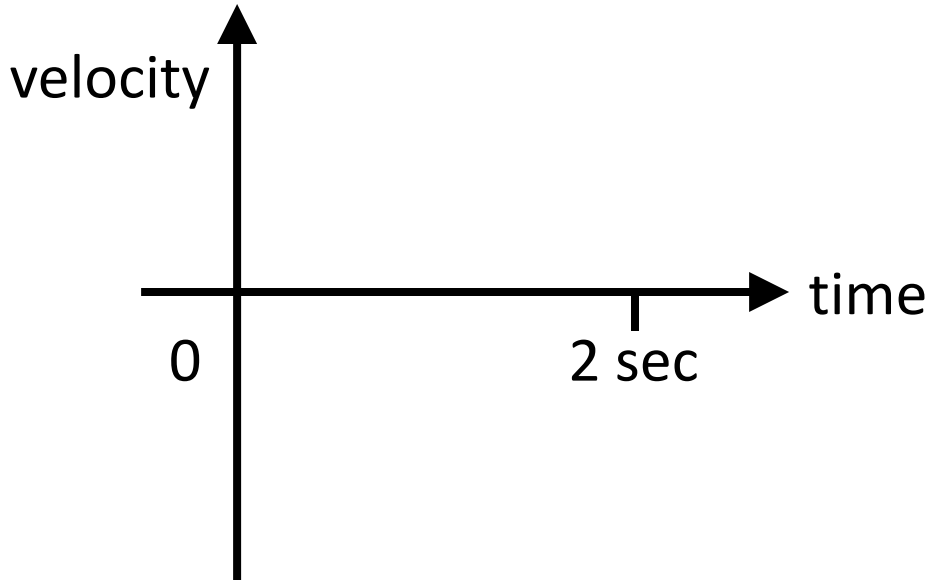


(Prather)

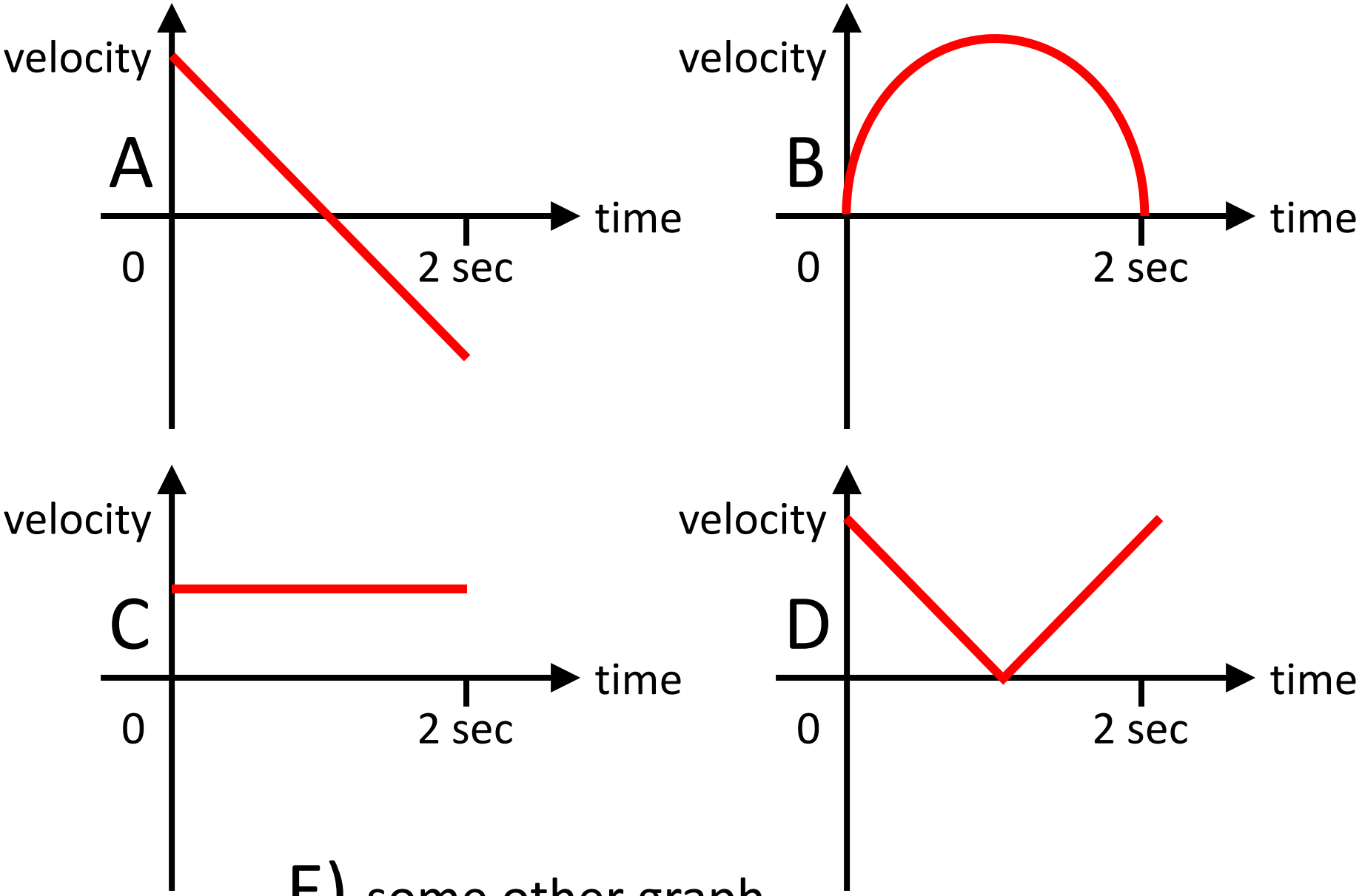
Clicker question

Susan throws a ball straight up into the air. It goes up and then falls back into her hand 2 seconds later.

Draw a graph showing the velocity of the ball from the moment it leaves her hand until she catches it again.



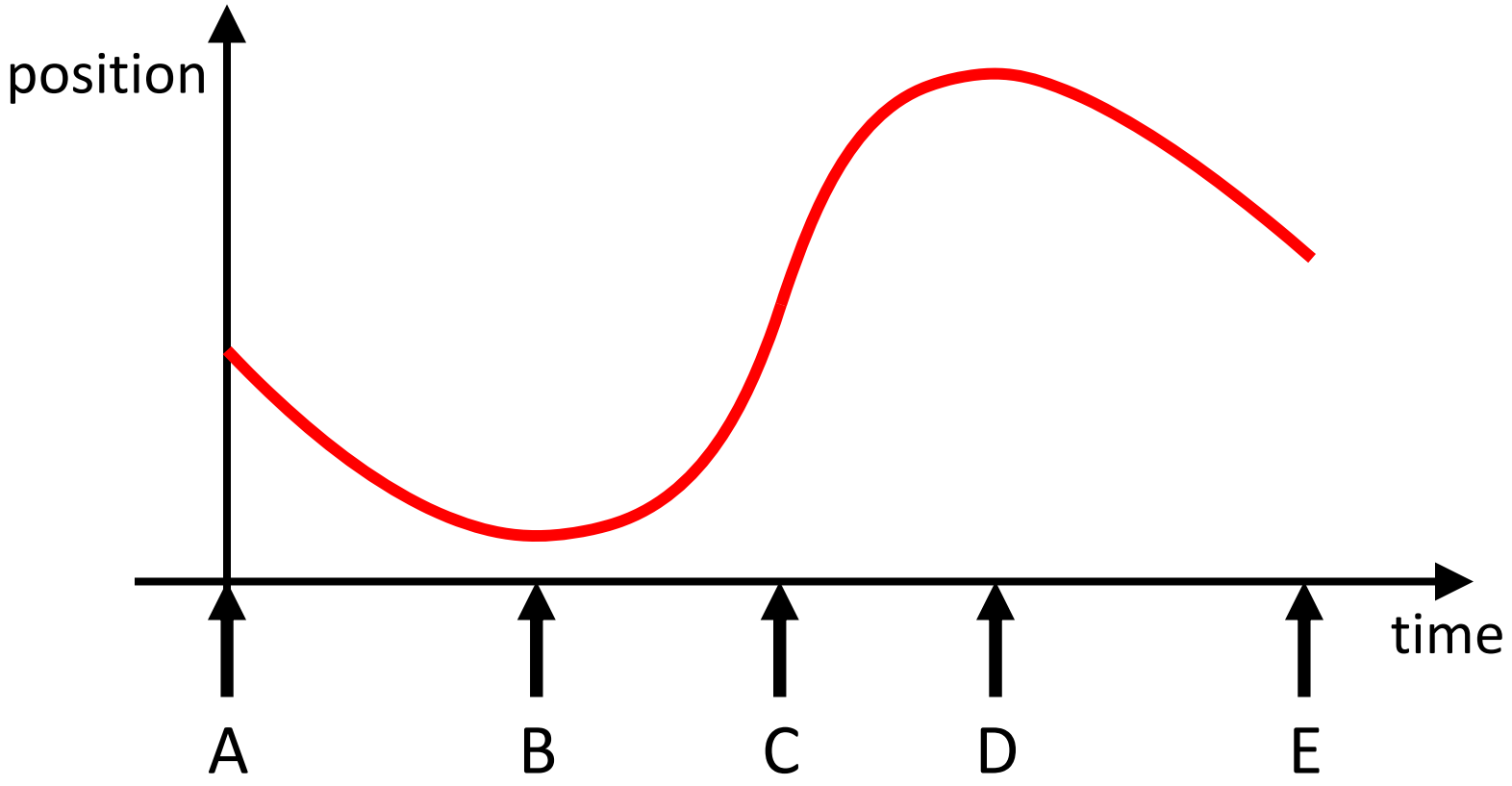
Which one is the closest match to your graph?



E) some other graph

Clicker question

John is walking to school. This graph shows his position as a function of time. When is John moving with the greatest velocity?



Clicker question

Which of the following is an incorrect step when using the substitution method to evaluate the definite integral

$$\int_0^4 x^2\sqrt{1+x^3}\,dx$$

A) $u = 1 + x^3$

B) $\dfrac{du}{3} = x^2 dx$

C) $\dfrac{1}{3}\displaystyle\int_0^4 \sqrt{u}\ du$

D) none of the above

(Bruff)

Clicker question

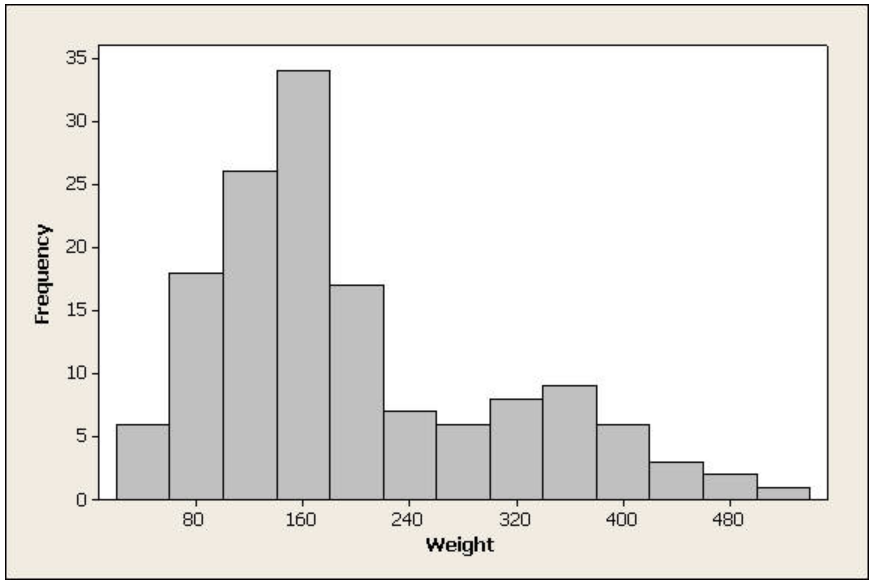
To minimize the work you do getting a heavy bag of groceries from the first floor to the second floor of a building, you should

A. carry the bag up the stairs
B. carry the bag up in an elevator
C. put the bag on the floor of an elevator, ride up with it, and then pick up the bag again
D. carry the bag up a ramp
E. put the bag in a cart and push it up a ramp

(Chasteen)

Clicker question

For the data set displayed in the following histogram, which would be larger, the mean or the median?



A) mean

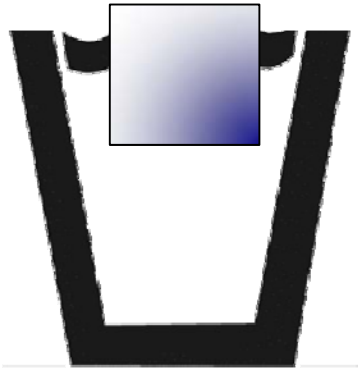
B) median

C) can't tell from the given histogram

(Peck, mathquest.carroll.edu/resources.html)

Clicker question

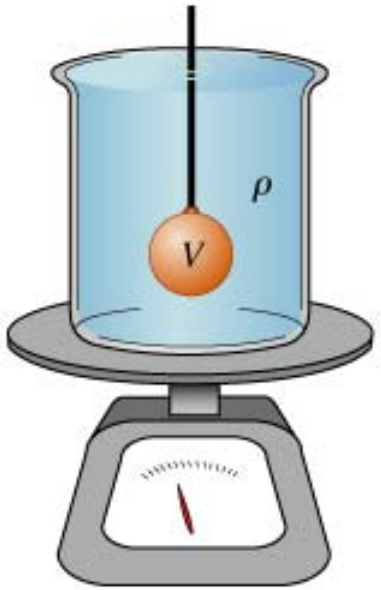
An ice cube is floating in a glass of water that is filled entirely to the brim. As the ice cube melts, the water level will



A) stay the same, remain at the brim.
B) rise, causing the water to spill.
C) fall to a level below the brim.
D) cannot say without knowing the density of ice.

Question

If you lower a 1.5 kg mass on a string into a 5 kg beaker filled with water, what happens to the reading on the scale?



A) increases to 6.5 kg
B) increases to a value < 6.5 kg
C) increases to a value > 6.5 kg
D) stay the same

Demo: prediction

A cup filled with water has a hole in the side through which the liquid is flowing out. If the cup is dropped for a height, what will happen to the water flowing from the cup?

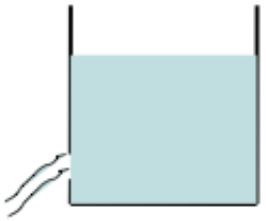
A. It will keep on coming out, flowing the same as before

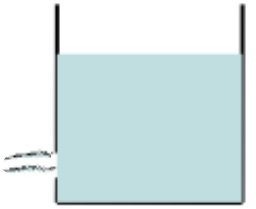
B. It will keep coming out, but it will flow a bit slower than before

C. It will keep coming out, but start to flow upwards

D. It will keep coming out, flowing horizontally with the falling cup

E. It will stop flowing



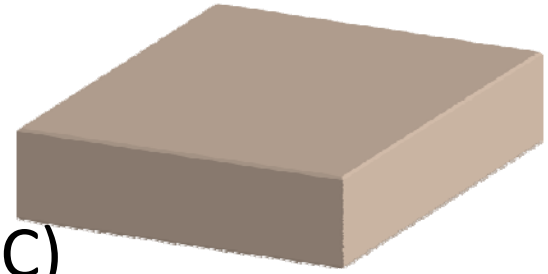


i>clicker

Consider a block of wood that has varying dimensions. Does the pressure exerted on the table from the block depend on the blocks position? If so, which way produces the greatest pressure? If not, why not?

A) 

B) 

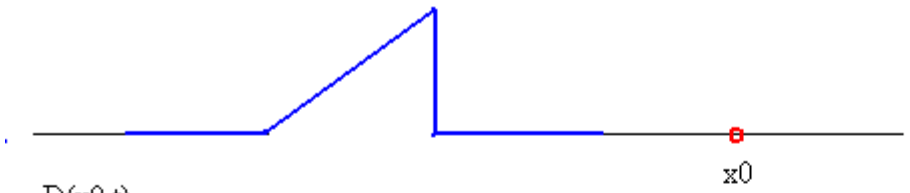
C) 

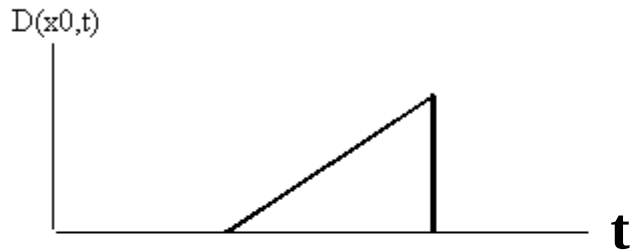
D) The block of wood has the same density, so it doesn't matter which way it is positioned.

E) The block of wood has the same mass, so it doesn't matter which way it is positioned.

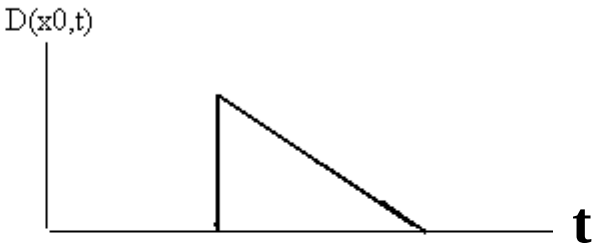
Question

A pulse is moving along a string towards a point located at x0. As the pulse is passing through, the vertical displacement of x0 is correctly described by which of the following graphs?

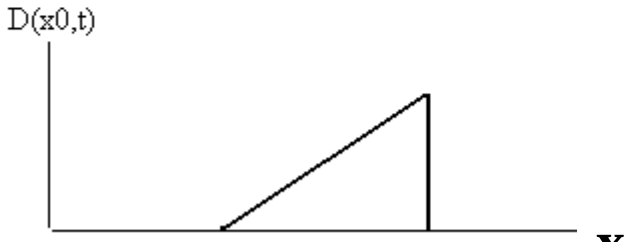




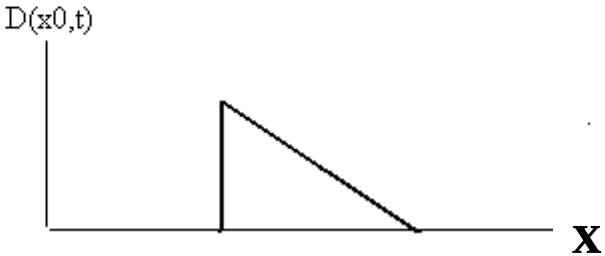
(A)



(C)



(B)



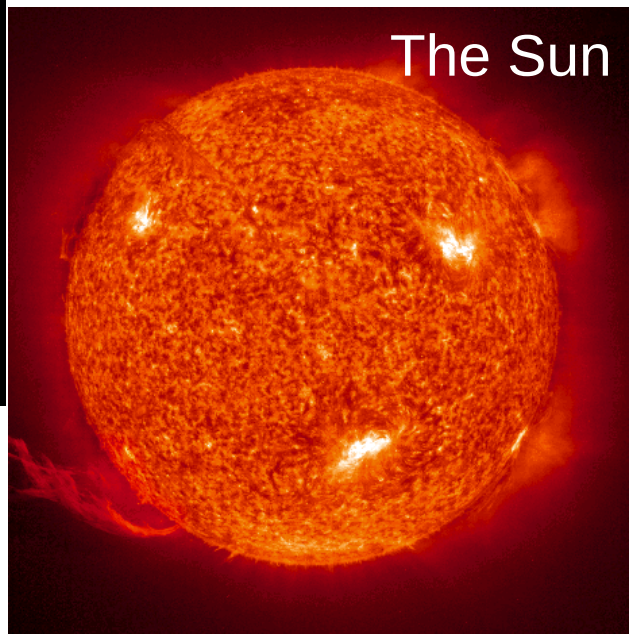
(D)

(A)

Which of these has the largest average density?

(B)

(C)



(D) I need more information

http://www.solarspace.co.uk/jupiter.php

http://justearth.net/

http://curious.astro.cornell.edu/sun.php

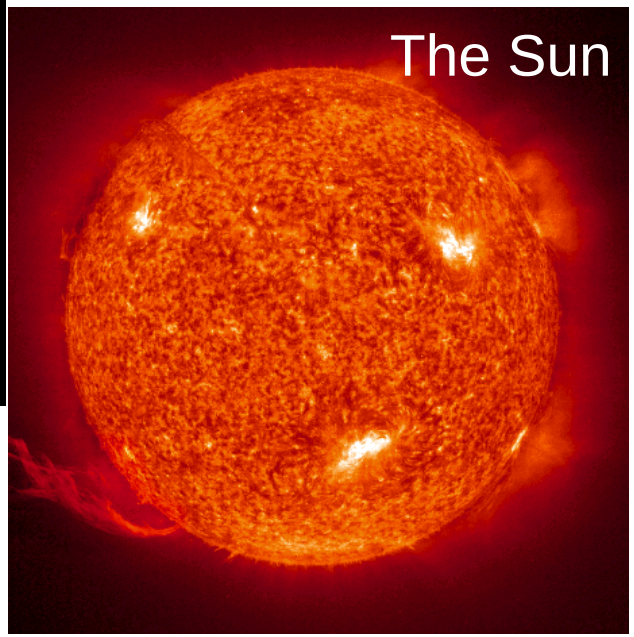
What about the density of non-uniform objects?

(A)

Which of these has the largest average density?

(B)

(C)



(D) I need more information

http://www.solarspace.co.uk/jupiter.php

http://justearth.net/

http://curious.astro.cornell.edu/sun.php