Questions

Activity 1: Fluid Pressure Concepts

Question Group 1

Question 1

The pressure exerted by a liquid at any location is dependent upon _____.
a. the liquid's volume and its density.
b. the distance above its bottom.
c. the depth relative to its surface and nothing else.
d. the density of the liquid and the distance below its surface.

Question 2

The pressure exerted by a liquid at any location is dependent upon _____.
a. the distance above its bottom.
b. the depth relative to its surface and nothing else.
c. the density of the liquid and the distance below its surface.
d. the liquid's volume and its density.

Question 3

The pressure exerted by a liquid at any location is dependent upon _____.
a. the depth relative to its surface and nothing else.
b. the density of the liquid and the distance below its surface.
c. the liquid's volume and its density.
d. the distance above its bottom.

Question 4

The pressure exerted by a liquid at any location is dependent upon _____.
a. the density of the liquid and the distance below its surface.
b. the liquid's volume and its density.
c. the distance above its bottom.
d. the depth relative to its surface and nothing else.

Question Group 2

Question 5

Fluid pressure in a liquid-filled container is _____.
a. greatest at the greatest depth
b. the same value at all depths

c. greatest near its top surface
d. of negligible strength at all locations except for the container's bottom

Question 6
Fluid pressure in a liquid-filled container is _____.
a. the same value at all depths
b. greatest near its top surface
c. of negligible strength at all locations except for the container's bottom
d. greatest at the greatest depth

Question 7
Fluid pressure in a liquid-filled container is _____.
c. greatest near its top surface
b. of negligible strength at all locations except for the container's bottom
c. greatest at the greatest depth
d. the same value at all depths

Question 8
Fluid pressure in a liquid-filled container is _____.
a. of negligible strength at all locations except for the container's bottom
b. greatest at the greatest depth
c. the same value at all depths
d. greatest near its top surface

Question Group 3
Question 9
Due to fluid pressure with a container, the fluid pushes upon the container wall with a net force that is directed _____.
a. perpendicular to the wall
b. in an unpredictable direction
c. mostly downward
d. mostly upward

Question 10
Due to fluid pressure with a container, the fluid pushes upon the container wall with a net force that is directed _____.
a. in an unpredictable direction

b. mostly downward
c. mostly upward
d. perpendicular to the wall

Question 11
Due to fluid pressure with a container, the fluid pushes upon the container wall with a net force that is directed _____.
a. mostly downward
b. mostly upward
c. perpendicular to the wall
d. in an unpredictable direction

Question 12
Due to fluid pressure with a container, the fluid pushes upon the container wall with a net force that is directed _____.
a. mostly upward
b. perpendicular to the wall
c. in an unpredictable direction
d. mostly downward

Question Group 4
Question 13
For an object submerged in water, the fluid pressure on its top surface is _____.
a. equal to the fluid pressure on its bottom surface
b. greater than the fluid pressure on its bottom surface
c. less than the fluid pressure on its bottom surface

Question 14
For an object submerged in water, the fluid pressure on its top surface is _____.
a. greater than the fluid pressure on its bottom surface
b. less than the fluid pressure on its bottom surface
c. equal to the fluid pressure on its bottom surface

Question 15
For an object submerged in water, the fluid pressure on its bottom surface is _____.
a. equal to the fluid pressure on its top surface
b. greater than the fluid pressure on its top surface

c. less than the fluid pressure on its top surface

Question 16
For an object submerged in water, the fluid pressure on its bottom surface is _____.
a. greater than the fluid pressure on its top surface
b. less than the fluid pressure on its top surface
c. equal to the fluid pressure on its top surface

Question Group 5
Question 17
Fluid pressure in a liquid-filled container exists _____.
a. only on the container walls
b. at all locations within the fluid
c. only at the bottom of the fluid
d. nonsense! Liquids do not exert pressure. Only gases do.

Question 18
Fluid pressure in a liquid-filled container exists _____.
a. at all locations within the fluid
b. only at the bottom of the fluid
c. only on the container walls
d. nonsense! Liquids do not exert pressure. Only gases do.

Question 19
Fluid pressure in a liquid-filled container exists _____.
a. only at the bottom of the fluid
b. only on the container walls
c. at all locations within the fluid
d. nonsense! Liquids do not exert pressure. Only gases do.

Question 20
Fluid pressure in a liquid-filled container exists _____.
a. nonsense! Liquids do not exert pressure. Only gases do.
b. only on the container walls
c. at all locations within the fluid
d. only at the bottom of the fluid

Question Group 6

Question 21

At a given depth within a liquid, the liquid pushes with a force that is _____

a. greater in the upward direction than in the downward direction
b. greater in the downward direction than in the upward direction
c. of the same magnitude in all directions
d. directed only in the upward direction

Question 22

At a given depth within a liquid, the liquid pushes with a force that is _____

a. greater in the downward direction than in the upward direction
b. of the same magnitude in all directions
c. directed only in the upward direction
d. greater in the upward direction than in the downward direction

Question 23

At a given depth within a liquid, the liquid pushes with a force that is _____

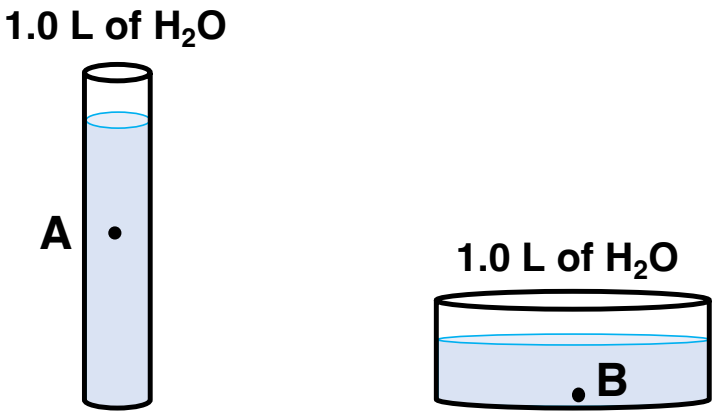
a. of the same magnitude in all directions
b. directed only in the upward direction
c. greater in the upward direction than in the downward direction
d. greater in the downward direction than in the upward direction

Question 24

At a given depth within a liquid, the liquid pushes with a force that is _____

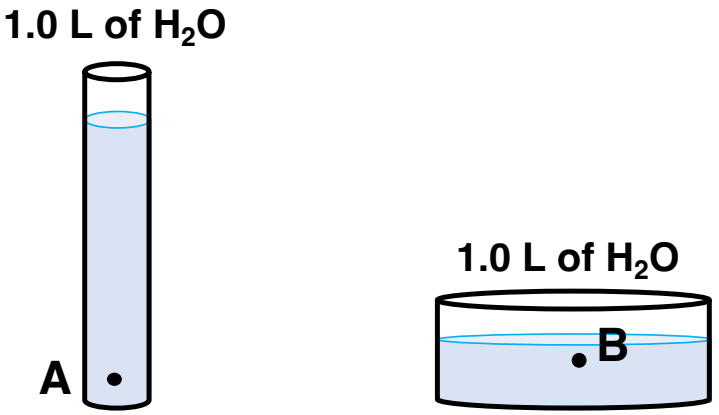
a. directed only in the upward direction
b. greater in the upward direction than in the downward direction
c. greater in the downward direction than in the upward direction
d. of the same magnitude in all directions

Activity 2: Case Studies
Question Group 7
Question 25
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



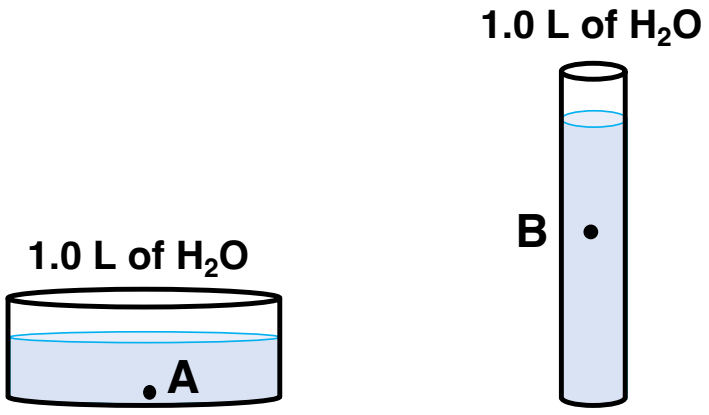
Greatest at A Greatest at B Same at each Location

Question 26
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



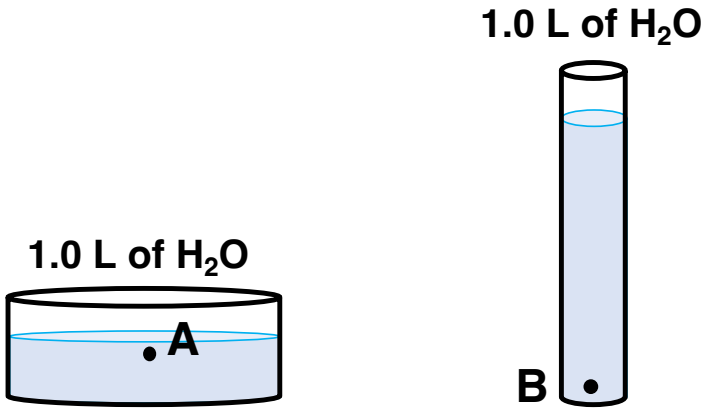
Greatest at A Greatest at B Same at each Location

Question 27
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



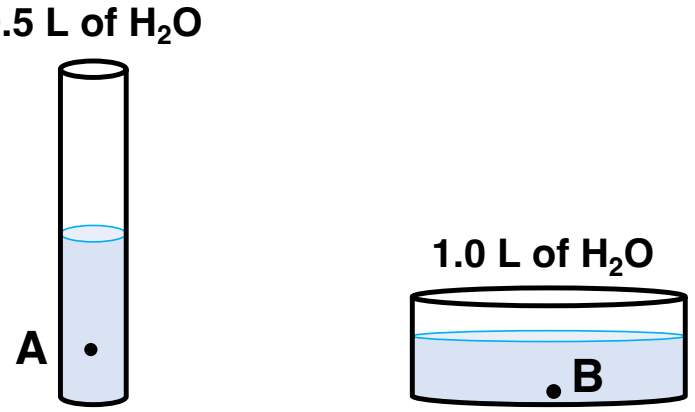
Greatest at A Greatest at B Same at each Location

Question 28
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



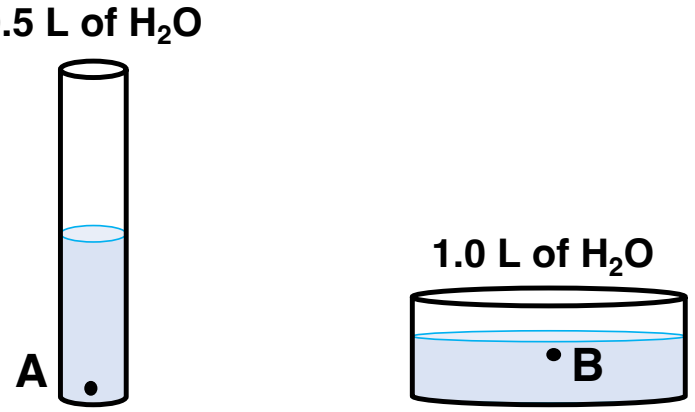
Greatest at A Greatest at B Same at each Location

Question Group 8
Question 29
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



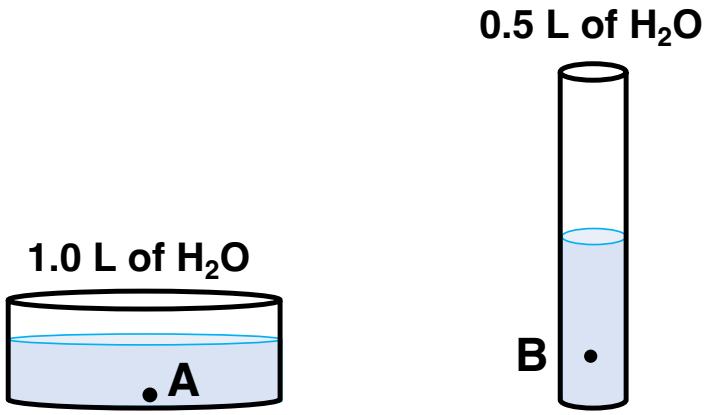
Greatest at A Greatest at B Same at each Location

Question 30
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



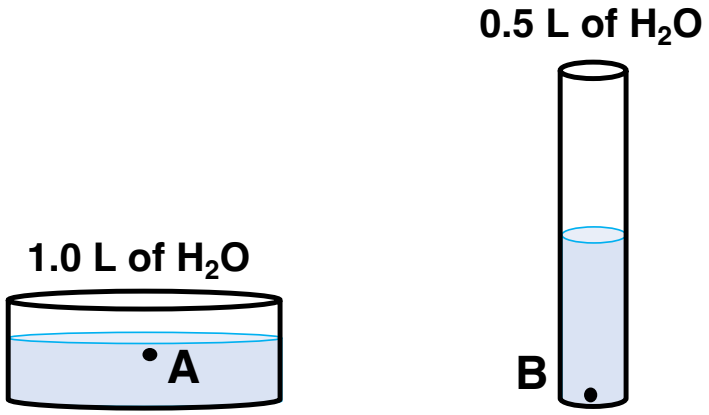
Greatest at A Greatest at B Same at each Location

Question 31
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



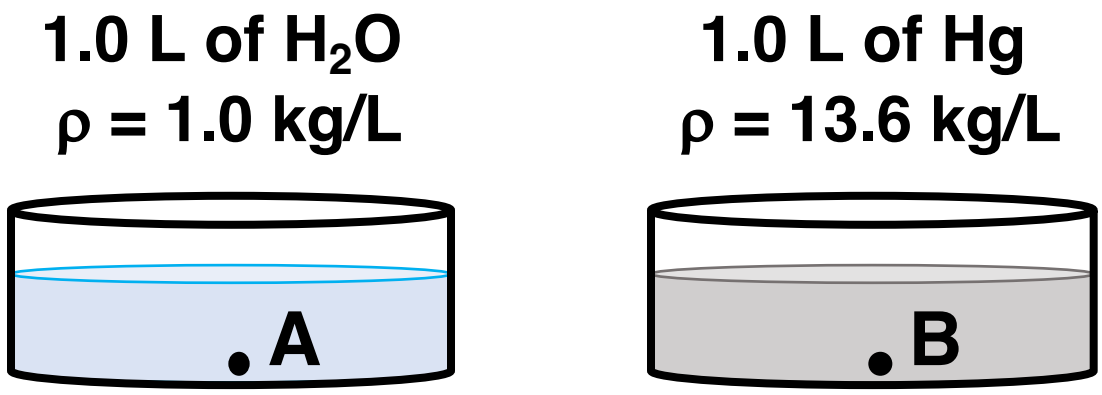
Greatest at A Greatest at B Same at each Location

Question 32
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



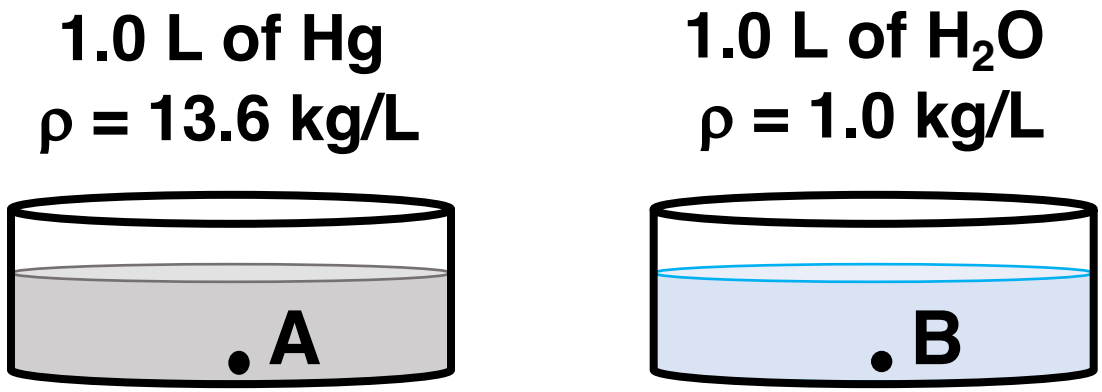
Greatest at A Greatest at B Same at each Location

Question Group 9
Question 33
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



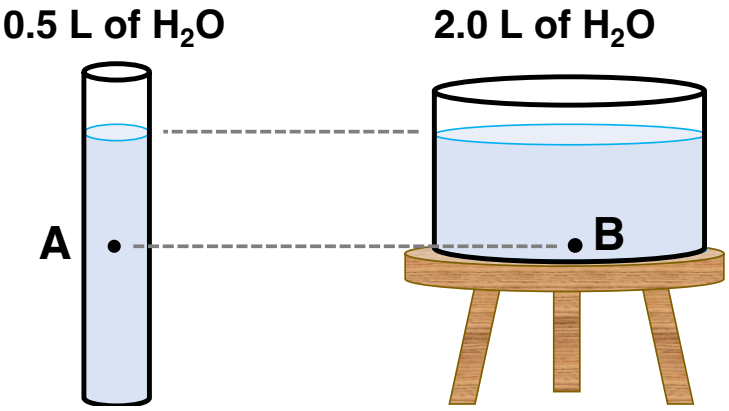
Greatest at A Greatest at B Same at each Location

Question 34
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



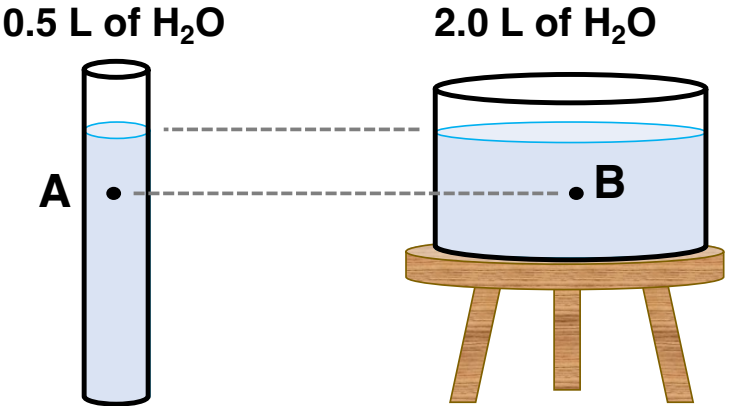
Greatest at A Greatest at B Same at each Location

Question Group 10
Question 35
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



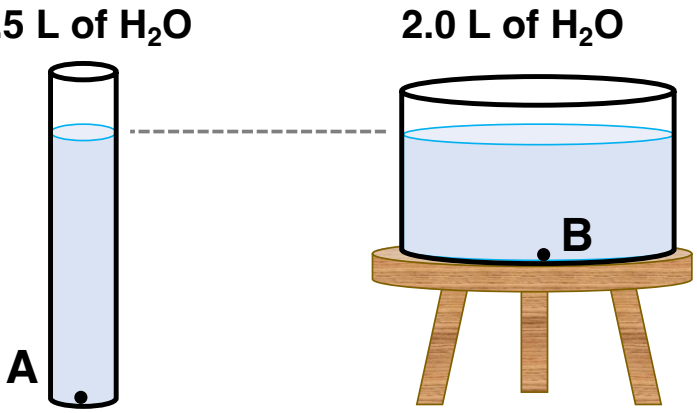
Greatest at A Greatest at B Same at each Location

Question 36
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



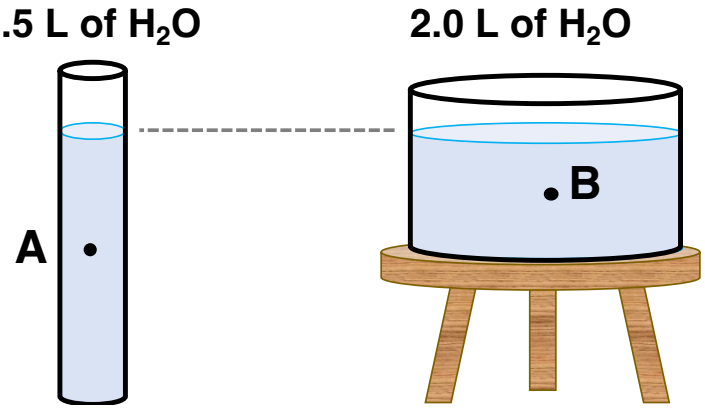
Greatest at A Greatest at B Same at each Location

Question 37
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



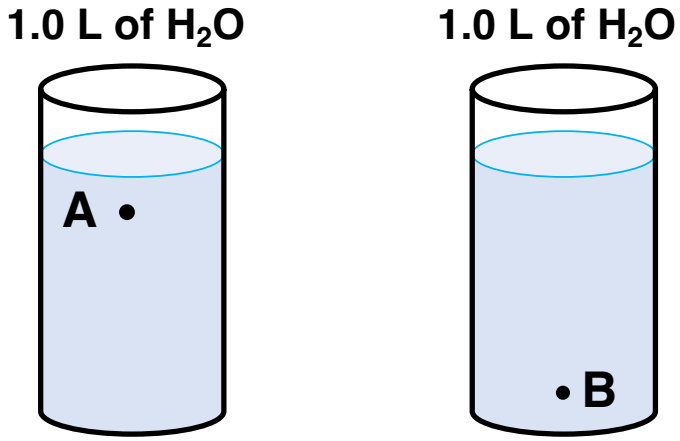
Greatest at A Greatest at B Same at each Location

Question 38
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



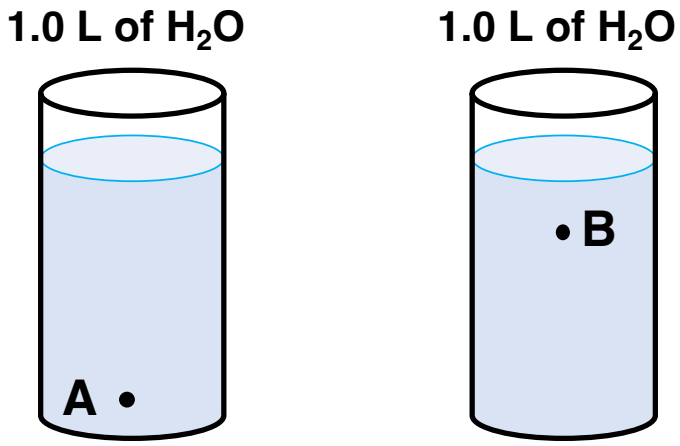
Greatest at A Greatest at B Same at each Location

Question Group 11
Question 39
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



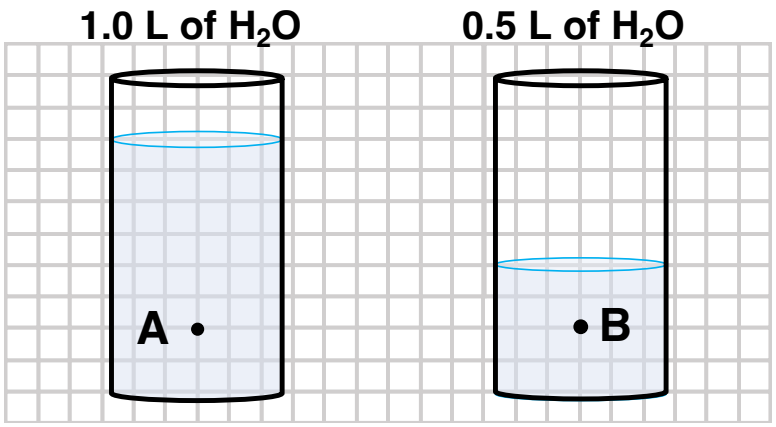
Greatest at A Greatest at B Same at each Location

Question 40
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



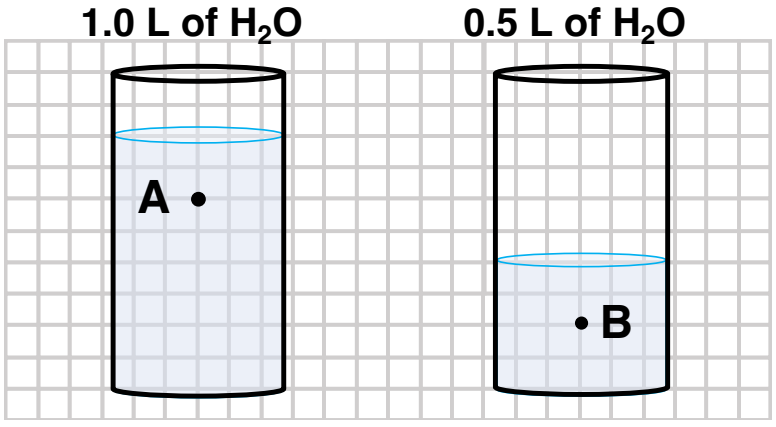
Greatest at A Greatest at B Same at each Location

Question Group 12
Question 41
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



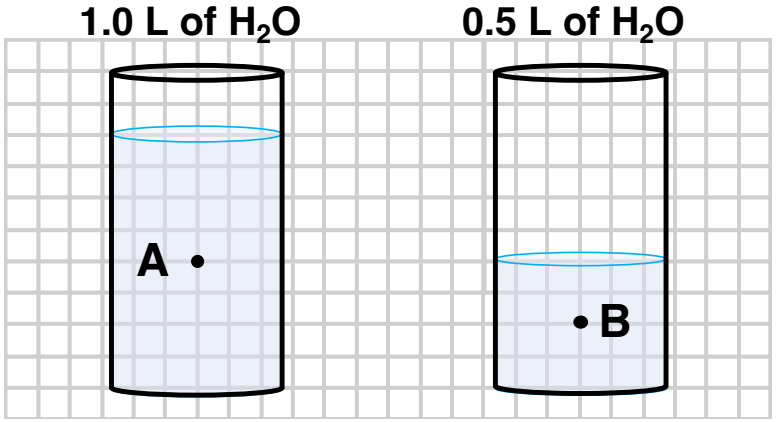
Greatest at A Greatest at B Same at each Location

Question 42
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



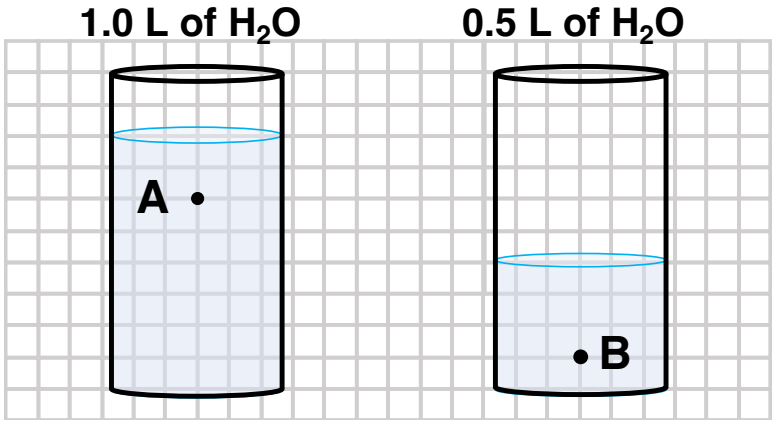
Greatest at A Greatest at B Same at each Location

Question 43
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



Greatest at A Greatest at B Same at each Location

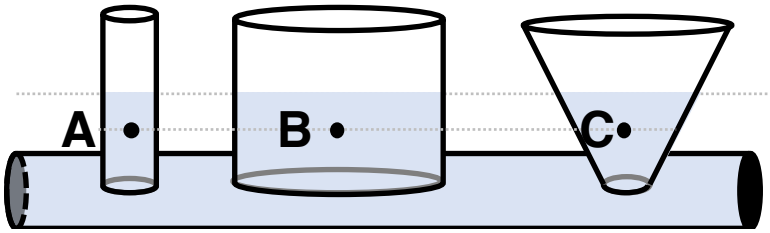
Question 44
Consider locations A and B in the following situations. At which location will the fluid pressure be the greatest?



Greatest at A Greatest at B Same at each Location

Activity 3 Ranking Tasks
Question Group 13
Question 45
Rank the fluid pressure at locations A, B, and C.

Note: ">" means *greater than*.



A > B > C
C > B > A
B = C > A

A > C > B
A = B = C
B > A = C

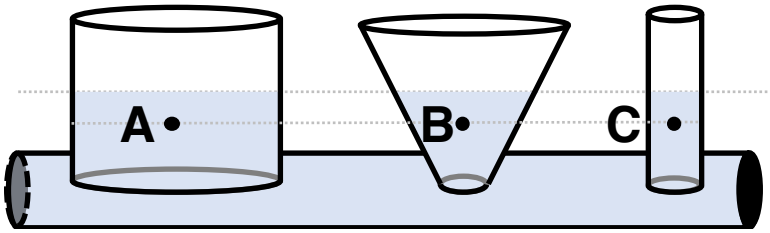
B > A > C
A = B > C
C > A = B

B > C > A
A = C > B

C > A > B
A > B = C

Question 46
Rank the fluid pressure at locations A, B, and C.

Note: ">" means *greater than*.



A > B > C
C > B > A
B = C > A

A > C > B
A = B = C
B > A = C

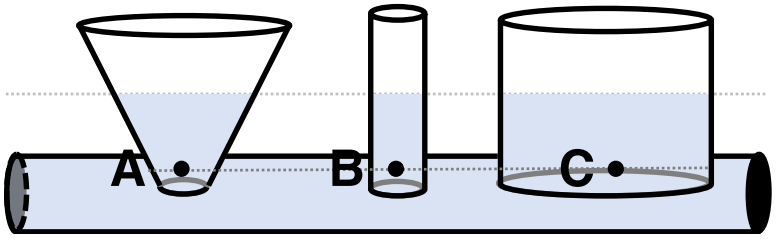
B > A > C
A = B > C
C > A = B

B > C > A
A = C > B

C > A > B
A > B = C

Question 47
Rank the fluid pressure at locations A, B, and C.

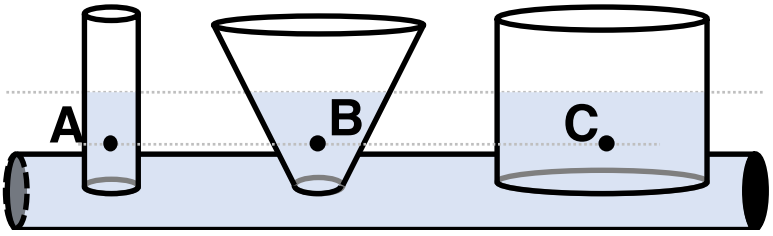
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question 48
Rank the fluid pressure at locations A, B, and C.

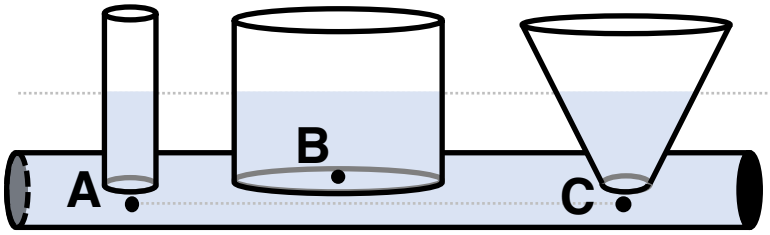
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question Group 14
Question 49
Rank the fluid pressure at locations A, B, and C.

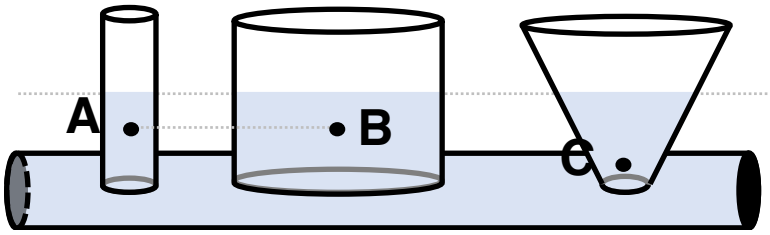
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question 50
Rank the fluid pressure at locations A, B, and C.

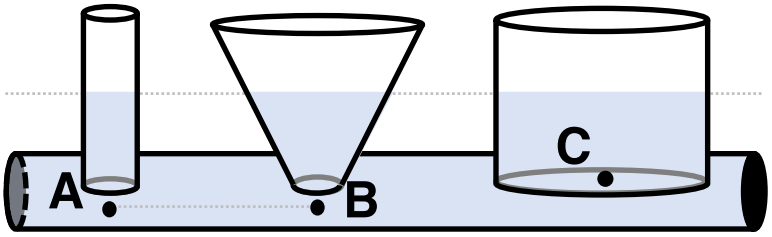
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question 51
Rank the fluid pressure at locations A, B, and C.

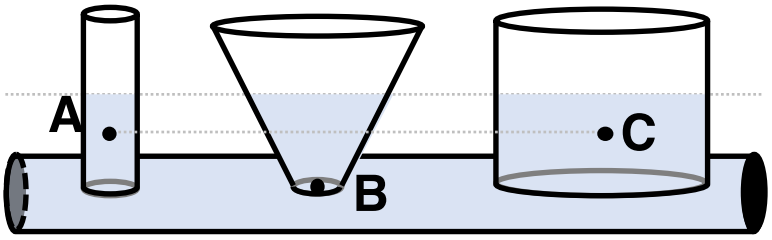
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question 52
Rank the fluid pressure at locations A, B, and C.

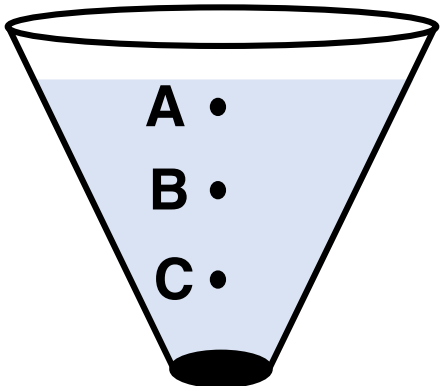
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question Group 15
Question 53
Rank the fluid pressure at locations A, B, and C.

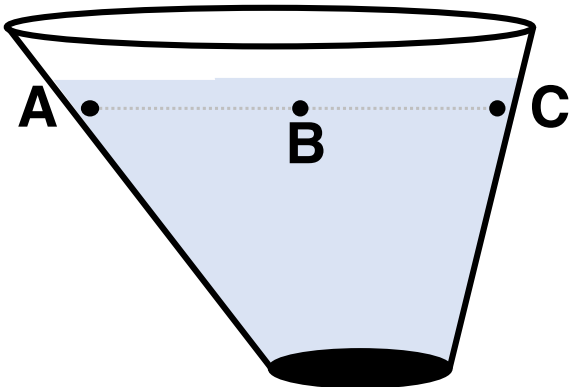
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question 54
Rank the fluid pressure at locations A, B, and C.

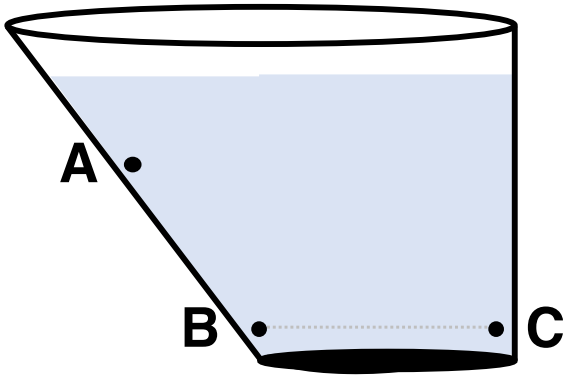
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question 55
Rank the fluid pressure at locations A, B, and C.

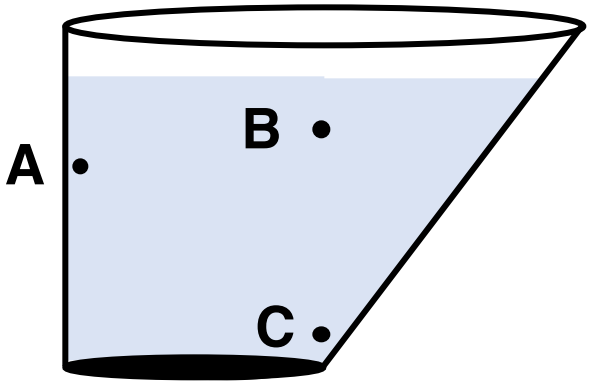
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question 56
Rank the fluid pressure at locations A, B, and C.

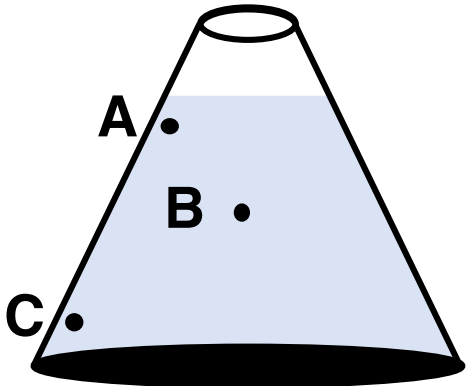
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question Group 16
Question 57
Rank the fluid pressure at locations A, B, and C.

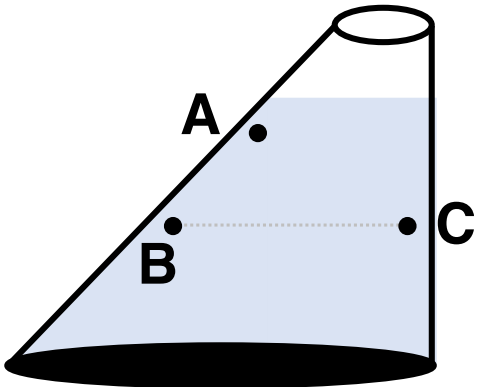
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question 58
Rank the fluid pressure at locations A, B, and C.

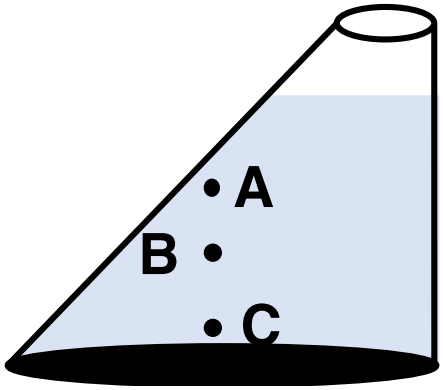
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question 59
Rank the fluid pressure at locations A, B, and C.

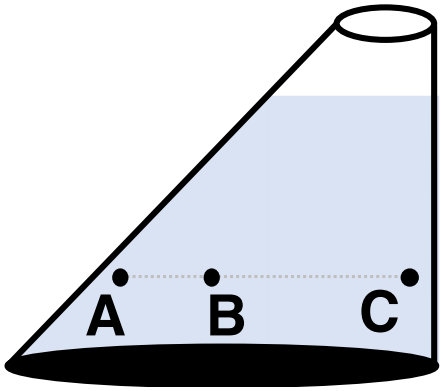
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question 60
Rank the fluid pressure at locations A, B, and C.

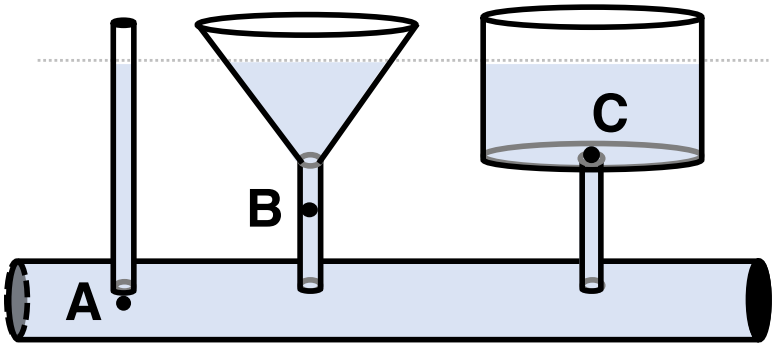
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question Group 17
Question 61
Rank the fluid pressure at locations A, B, and C.

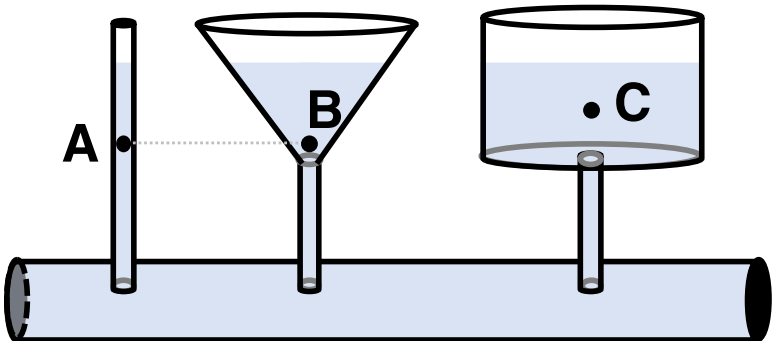
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question 62
Rank the fluid pressure at locations A, B, and C.

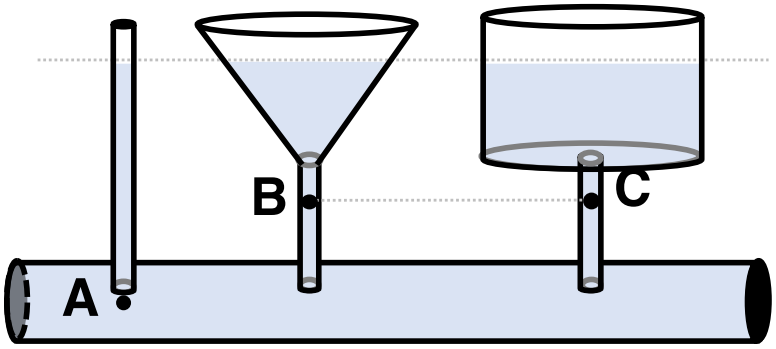
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question 63
Rank the fluid pressure at locations A, B, and C.

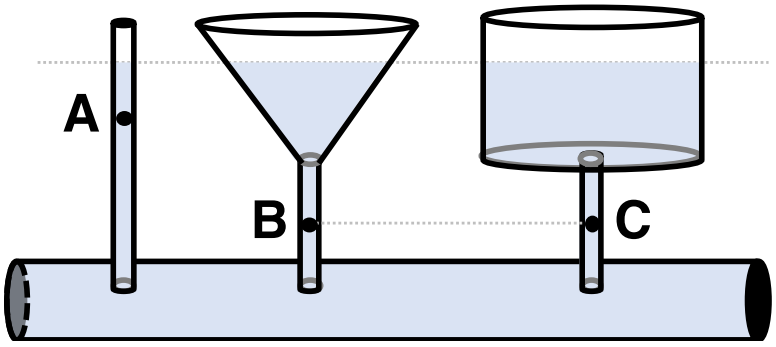
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question 64
Rank the fluid pressure at locations A, B, and C.

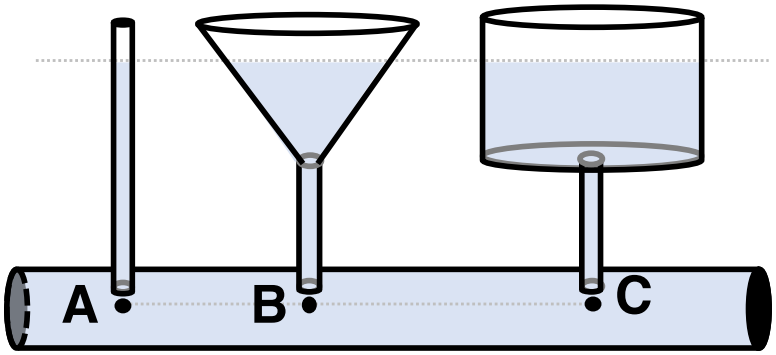
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question Group 18
Question 65
Rank the fluid pressure at locations A, B, and C.

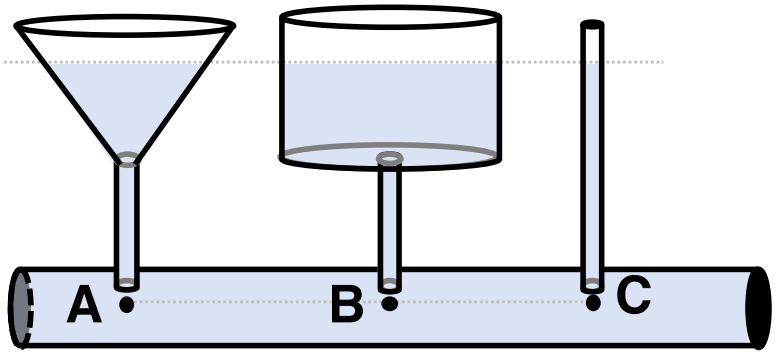
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question 66
Rank the fluid pressure at locations A, B, and C.

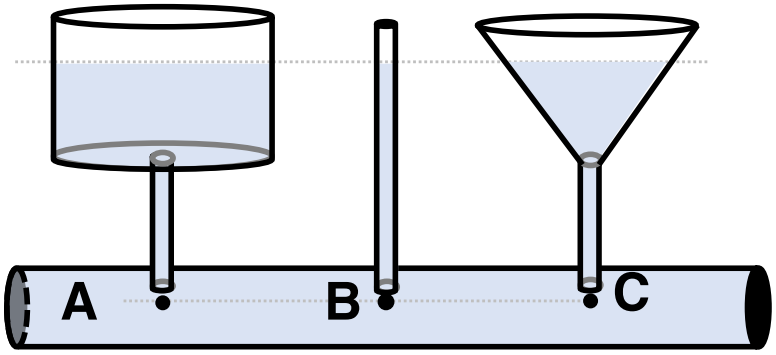
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question 67
Rank the fluid pressure at locations A, B, and C.

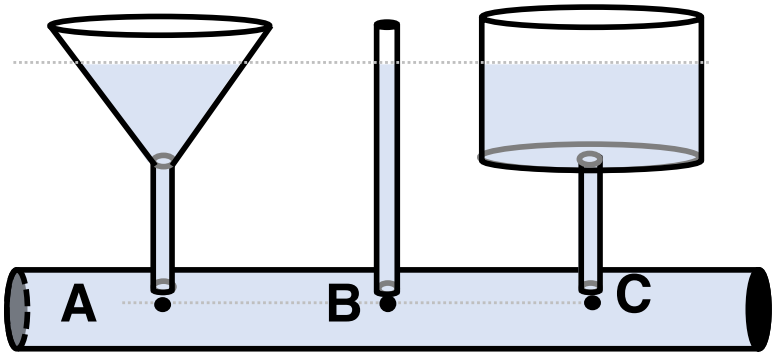
Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		

Question 68
Rank the fluid pressure at locations A, B, and C.

Note: ">" means *greater than*.



A > B > C	A > C > B	B > A > C	B > C > A	C > A > B
C > B > A	A = B = C	A = B > C	A = C > B	A > B = C
B = C > A	B > A = C	C > A = B		