What is the area of the smallest cylindrical slab of ice, 0.5 m thick, that will just support a man of mass 100 kg. The density of the ice is 0.917*(10**3) kg/(m**3), and it is floating on fresh water.

(A) 2.41 m**2
B. 0.20 m**2
C. 0.10 m**2
D. none of these answers
E. 1.20 m**2

The rate of flow of water through a horizontal pipe is 4.0 m**3/minute. What is speed of flow at point where the radius of the pipe is 0.05 m?

(A) 8.5 m/s
B. 9.4 m/s
C. 7.6 m/s
D. 6.5 m/s
E. 5.5 m/s

Water flows through a horizontal pipe of non-uniform crosssection. The pressure is 4.50 *(10**5) Pascals at a point where the speed is 2.00 m/s and the cross-sectional area is "A". Find the pressure at a point where the area is "A/4". The density of water is 1000 kg/(m**3).

A. 3.24*(10**5) Pascals
B. 3.83*(10**5) Pascals
C. 4.50*(10**5) Pascals
(D) 4.20*(10**5) Pascals
E. 4.02*(10**5) Pascals