Name_____ Period_____ Date_____

CONCEPTUAL PHYSICS ALIVE! VIDEO QUESTION SET

Liquids I

In this lecture, Paul Hewitt describes and demonstrates density, pressure, and buoyant force. Read the following questions before the presentation begins. Answer them while the presentation is in progress. [39 minutes]

1. Answer using a "word equation." (Mass) Density =

2. Which has the greater density?
A. a teaspoon of water **B. a "lakeful" of water**
C. same for both **D. not really enough information to say**

3. Which applies more FORCE to the floor?
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HEWITT says:
Pressure = F/A = Wt/A = DEN x VOL / A = DEN x A x DEPTH / A = DEN x DEPTH

SOME FOLKS say:
Pressure = F/A = mg/A* = ρgV/A** = ρAdg/A = ρgd

5. Which Pascal vase has the highest pressure reading?
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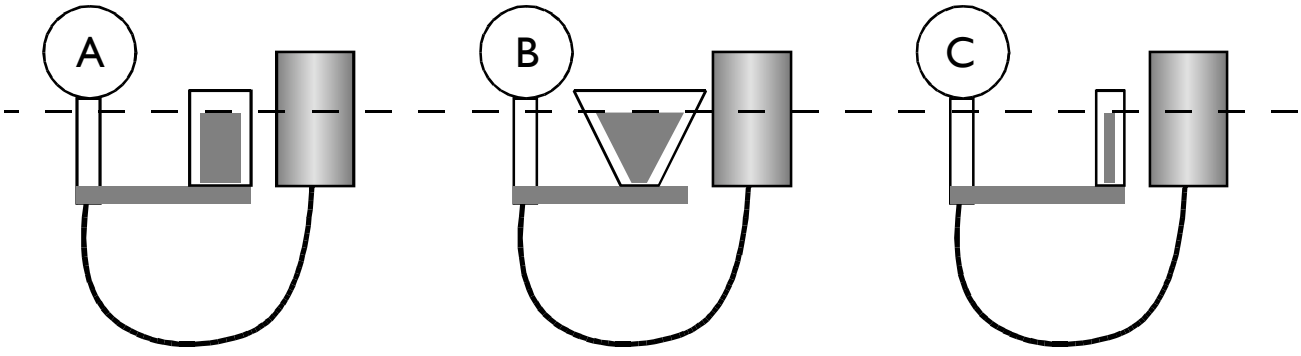

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6. Which is the best dam design?

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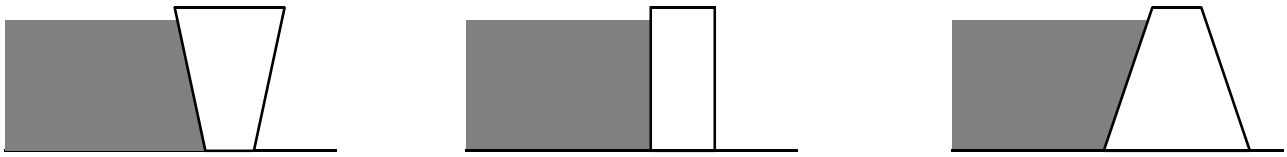

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8. Draw force vectors to show the effect that water pressure has on the top, bottom, and sides of the immersed object.

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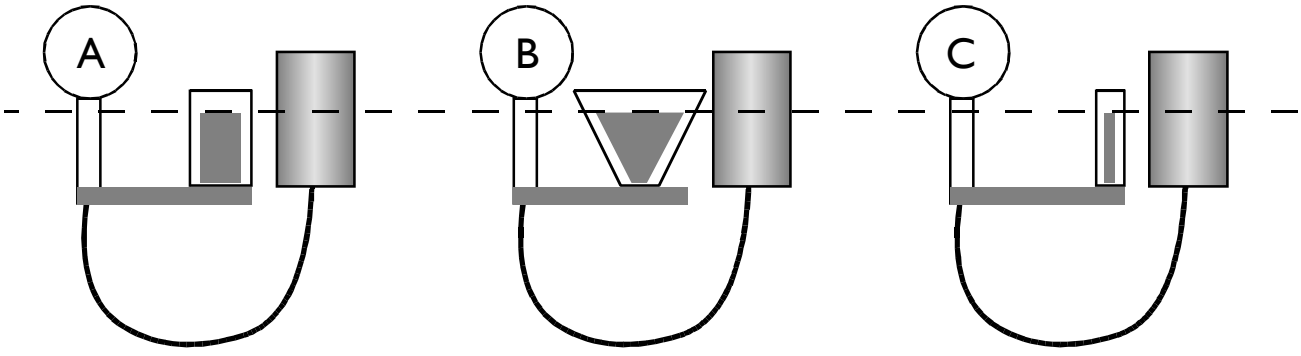

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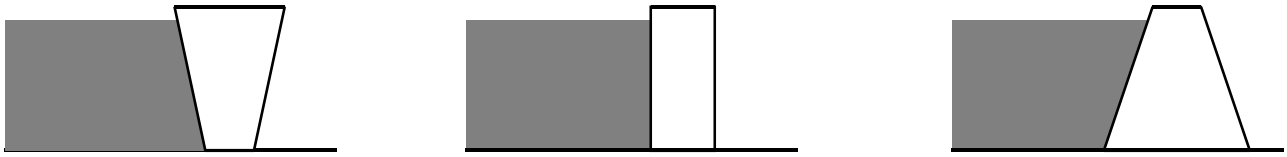

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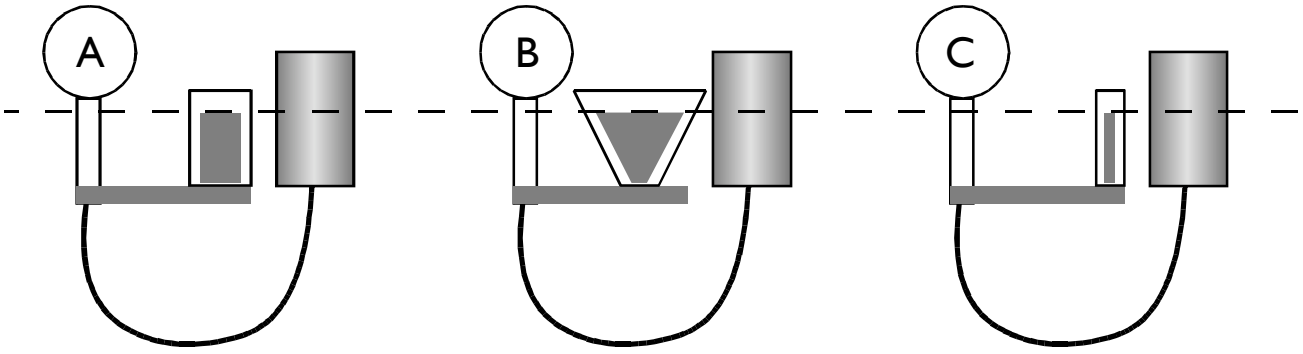

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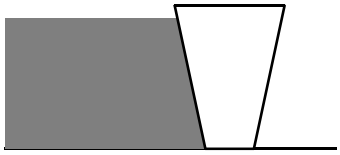

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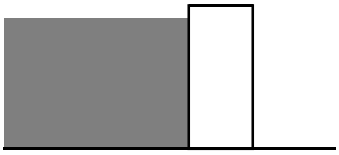

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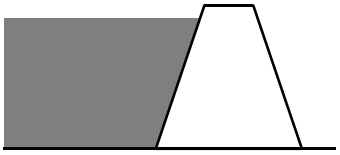

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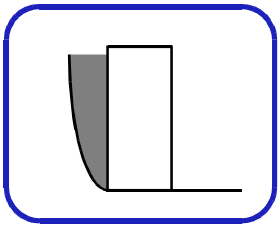

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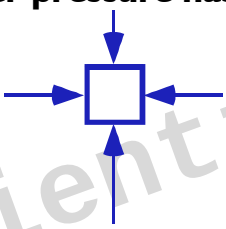

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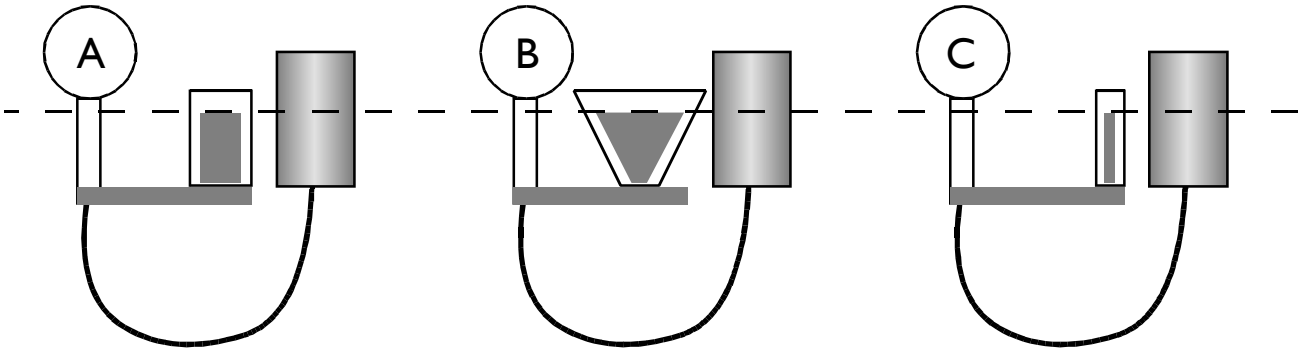

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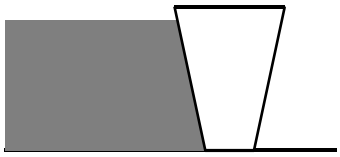

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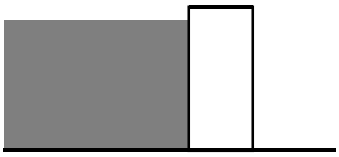

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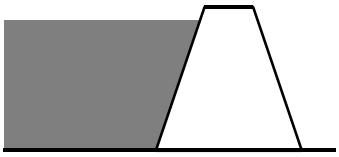

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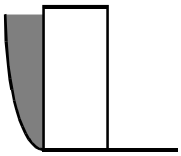

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