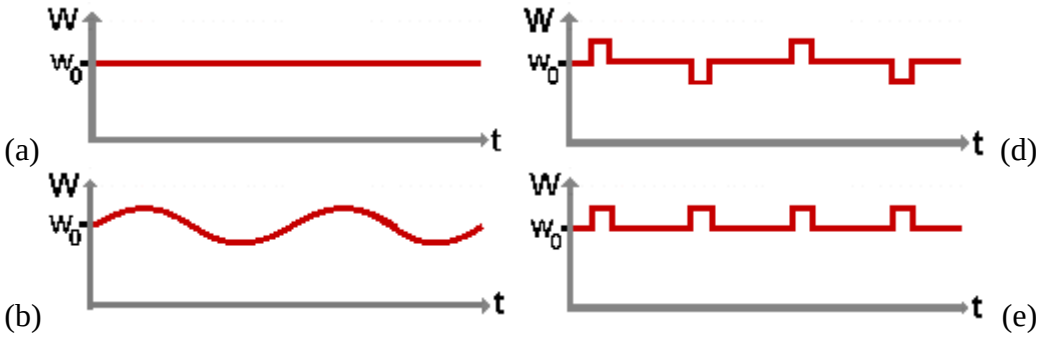
Question #203

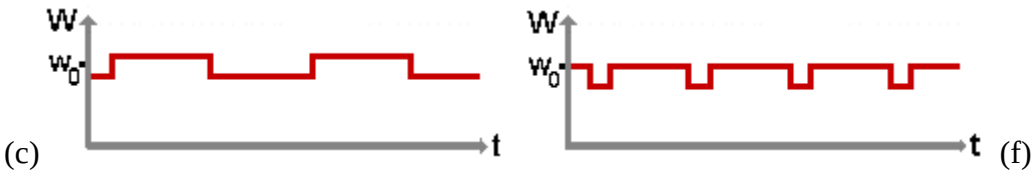
This one is a bit more complex than most, so we will give you a little extra time over the vacation to discuss it, and perhaps to experiment on your own.

I have a very nice bathroom scale, the Taylor Professional model, that measures up to 330 pounds (not that I use it all). One nice thing is that it has big numbers so even old geezers can see them, but the really neat thing about it is that it is so sensitive that it responds to my heartbeat. Shown below at the left is the full scale, with a close-up of the numbers at the right.

Immediately below is a "typical" graph of the reading of the scale if a weight "W_0" is placed on it.

Below are a bunch of possible graphs, labelled (a) through (f), of what the scale reading might look like as a function of time with me standing on the scale and my heart beating.





The question this week is which of these six graphs is most nearly like the actual graph that the scale produces as a function of time with me standing on the scale, if my weight with no heartbeat is "W_0."

- (a) graph (a).
- (b) graph (b).
- (c) graph (c).
- (d) graph (d).
- (e) graph (e).
- (f) graph (f).

Click here for Answer #203 after January 10, 2005.

Question of the Week

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For questions and comments regarding the *Question of the Week* contact Dr. Richard E. Berg by e-mail or using phone number or regular mail address given on the Lecture-Demonstration Home Page.