Theme Music:

Marianne Mackenzie and Walter Fox Smith

The Ballad of Willebrord Snell

Cartoon: Pat Brady

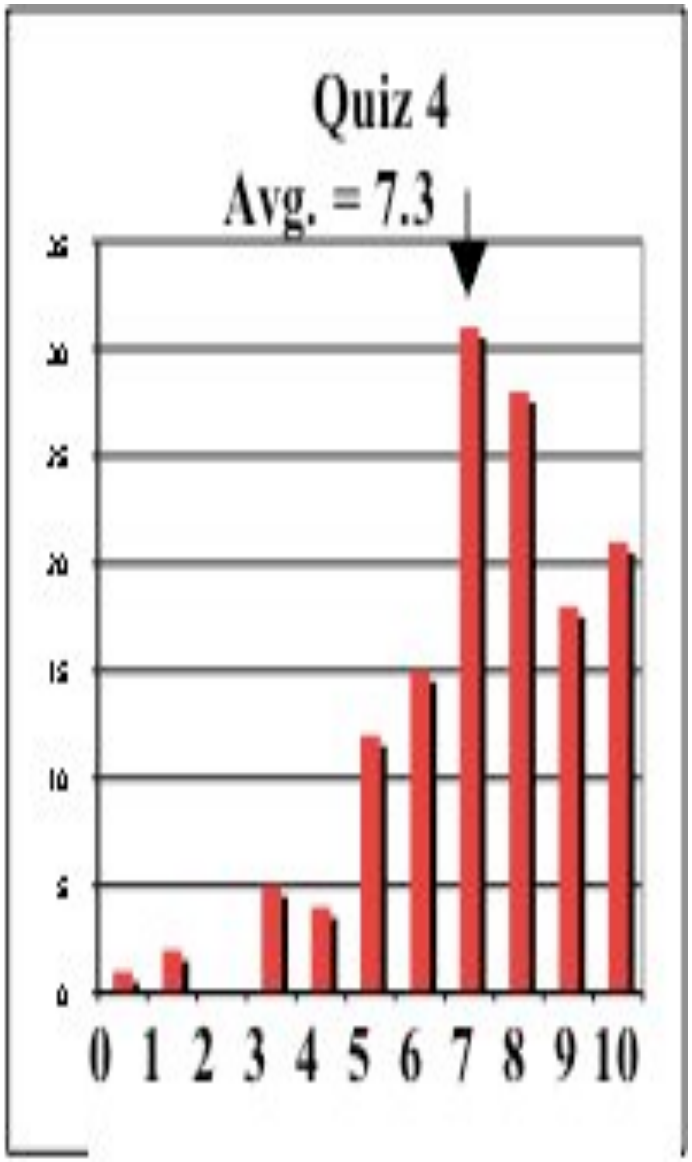
Rose is Rose

Outline

- Go over Quiz 4
- ILD 2
- A challenge to our foothold ideas about light
- Light as waves
  - Huygens' Principle
  - Interference
  - Connecting to the ray model

Quiz 4

	4.1.1		4.1.2		4.1.3		4.2	4.3
r	69%	s	66%	p	18%	a	21%	55%
v	28%	o	33%	m	82%	b	9%	40%
n	1%	n	0%	n	0%	c	67%	4%
						d	2%	1%
						e	0%	
						f	0%	

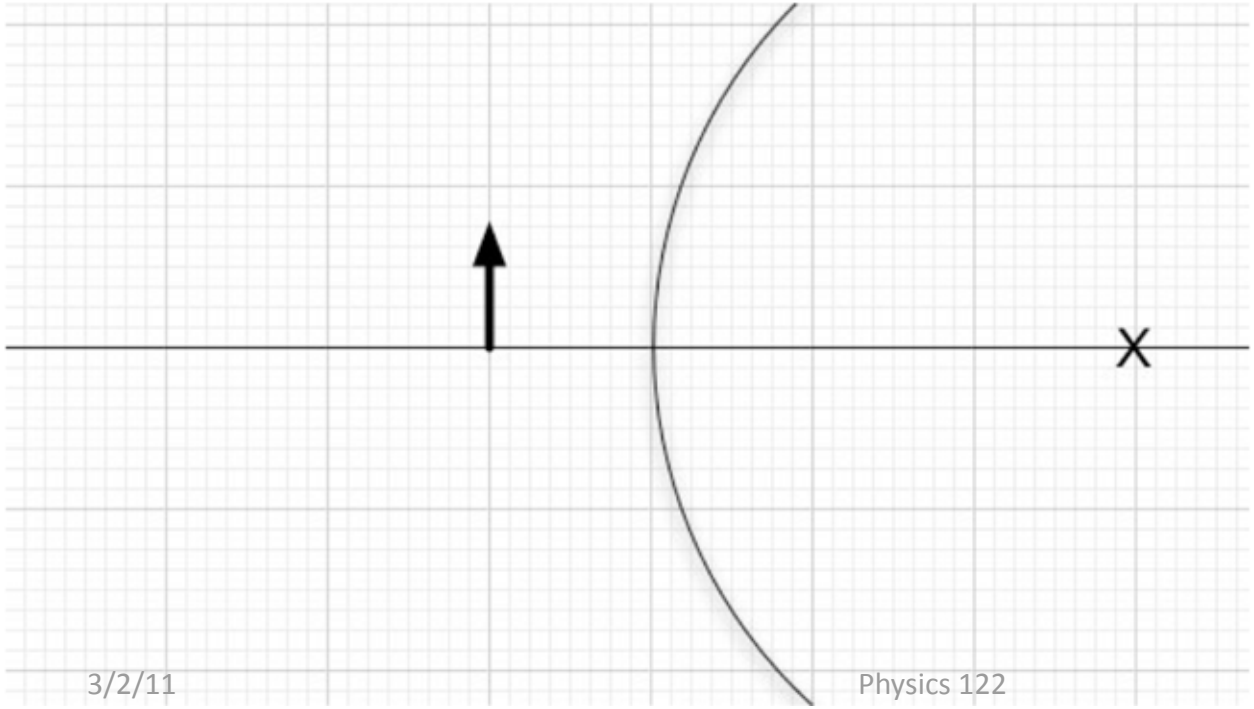


Example: *Looking into a Mirror Ball*

While visiting Ye Olde Shottle Bop, a store selling strange and exotic objects, you come across a perfectly mirrored glass sphere. It looks pretty strange and you hold your finger near it. Your situation is presented schematically in the figure below with an arrow drawn to represent your finger.

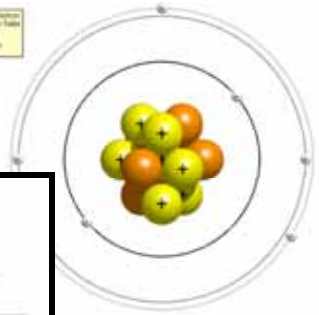
A) On the figure, draw a ray diagram that will help you identify where the image is located.

B) Is the image real or virtual? Explain why you say so.



C) The mirror has a radius of 32 cm, the finger is a distance of 8 cm from the surface of the mirror, and the finger is 8 cm long. Calculate the location and the size of the image using the mirror equation. Does your calculation agree with your drawing? If not, explain why not.

ILD 2
Working out what a model implies: Images



Example: *The Microscope*