

Ch. 23-25 Review

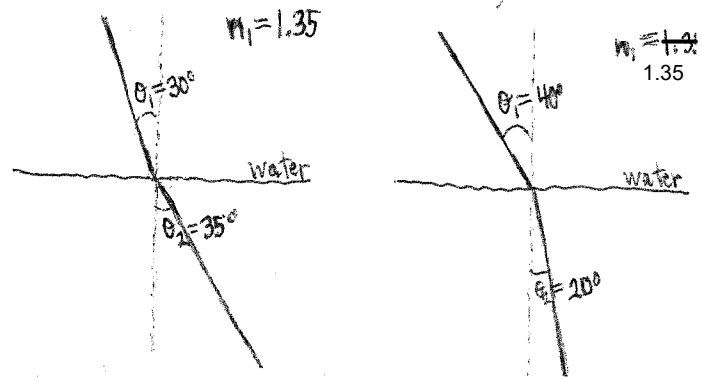
0. Magnetic flux is defined as ?
1. What causes electromagnetic induction?
2. What is Faraday's Law? (including what each symbol means)
3. What is Lenz's Law? How does it apply to magnetic brakes?
4. How does a microphone work?
5. How does a generator work? How does a transformer work?
6. What causes electromagnetic radiation?
7. What is the speed of light?
8. Why does light ~~fast~~ slow down when it passes through transparent materials?
9. How did Albert Michelson measure the speed of light? How about Ole Roemer?
10. What are the lowest energy electromag. waves?
11. What are the highest?

12. What are the primary additive colors?
13. What are the primary subtractive colors?
14. Why is the sky blue?
15. Why are sunsets red/orange?
16. Why is the ocean green/blue?

17. Light starts in water and enters a new medium, bending away from the normal. Is the index of refraction of the new medium higher, or lower?
18. Light starts in water and enters a new medium, bending towards the normal. Is the index of refraction of the new medium higher, or lower?

} diagrams below

19. What is Snell's Law?
20. Calculate n_2 in the diagrams on the right:
21. What is total internal reflection? How is it useful?
22. How do mirages happen?
23. Why do we see rainbows?
24. Why do diamonds sparkle so much?



(answers to #20: $n_2 = 1.2$, $n_2 = 2.5$)

(answer to #21, part 2: binoculars, fiber optics)