Year 10 Science: Light, colour and uses of electromagnetic waves

Name: _____ Date: _____

Try these without your notes first, then check the answer key.

Practice

1. A microwave oven uses microwaves of frequency 2.45×10^{9} Hz. Find their wavelength.

2. Red light has a wavelength of 7.0×10^{-7} m. Find its frequency.

3. A green apple is seen under red light. What colour does it look, and why?

4. Which EM wave would you choose to (a) find a lost tramper at night, (b) check a broken arm, (c) send a text?

5. Why is light from a torch visible at the bottom of a clear pool, but bent where it enters the water?

Fix the mistake

6. Correct this statement: "100 MHz, so $\lambda = 3.0 \times 10^{8} \div 100 = 3{,}000{,}000$ m."

7. Correct this statement: "A red shirt looks red under any light, because red is its colour."

8. Correct this statement: "Light entering glass bends away from the normal."

9. Correct this statement: "Radio waves are a kind of sound wave."