<u>Quiz 27.1C</u>

Light is incident on a diffraction grating and multiple orders of the visible spectrum (400-700 nm) are reflected on a nearby screen. For one of the orders (unknown order number), the angle of reflection of blue light (400 nm) is measured to be 12.0°.

- a) What will be the angle of reflection seen in the same order for red light (700 nm)? Answer with 3 SF.
- b) Suppose the unknown order referred to above is m = 2. What would be the line density of this grating (in lines/cm)?
- c) Given your answer to (b), how many complete orders of the visible spectrum can be observed?