

GCSE Physics B (Twenty First Century Science)
J259/04 Depth in physics (Higher Tier)

Question Set 23

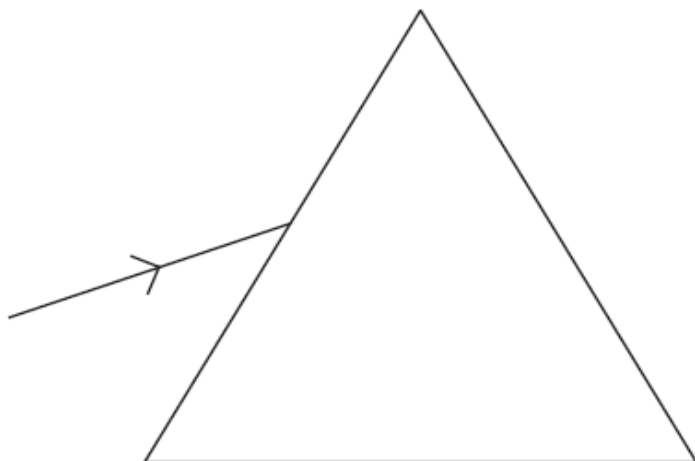
Multiple Choice Questions

1 Nina wants to make a rainbow maker for her window.

A rainbow maker is a prism and when sunlight hits the prism it makes a rainbow around the room.

(a) Complete the ray diagram to show what happens when a ray of **white light** enters and leaves a prism.

You should include the normal lines on your diagram.



[2]

(b) Nina investigates whether to use a glass prism or a crystal prism for her rainbow maker.

Nina measures the refracted angles of red light and violet light as they emerge from each prism, and records them in the table shown.

Prism	Angle of refraction of red light emerging from the prism ($^{\circ}$)	Angle of refraction of violet light emerging from the prism ($^{\circ}$)
Glass	53.5	55.2
Crystal	65.2	69.8

Nina comes to the following conclusion.

Nina
Crystal is better at producing a rainbow around the room, compared to glass.



Do you agree with Nina's conclusion?

Yes

No

Use data from the table to explain your answer.

[2]

Total Marks for Question Set 23: 4

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