Name: Class:

Student worksheet

4.6 Light reflects off a mirror

Pages 80–81 and 197–199

Reflection of light

1 Match the word with its definition below.

Opaque	The angle between the incident ray and the normal (the line drawn at right angles to a reflective surface)
Concave	Having the quality of allowing all light to pass through
Angle of incidence	Having the quality of not allowing all light to pass through
Transparent	Curving inwards
Virtual image	Curving outwards
Mirror	The angle between the reflected ray and the normal (the line drawn at right angles to a reflective surface)
Convex	Having the quality of allowing light through, but diffused so that objects cannot be seen clearly
Angle of reflection	A material that is able to reflect light
Translucent	An image that appears in a mirror; it cannot be captured on a screen

2 Name the quality and give an example of the type of object that will:

a let light pass through

_____

_____

b block light

_____

_____

c only allow some light through

_____

_____

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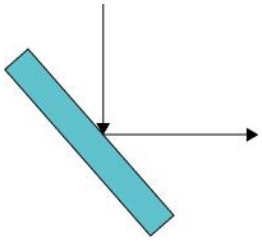
3 For the following mirror, draw the normal, the angle of incidence, the angle of reflection and label the incident and reflected rays.



4 What is the relationship between the angle of incidence and the angle of reflection?

_____

_____

5 What do you see when you look in a plane mirror?

_____

_____

6 Draw a diagram of a concave and convex mirror in the space below and give a real world example of where they are used.

a concave:

Light

_____

b convex:

Light

_____

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Extend your understanding

7 Investigate reflecting telescopes and draw a diagram of a Gregorian and Newtonian reflecting telescope below. In both cases, label the incident and reflected rays and the mirrors involved, and explain how they work.

a Gregorian:

b Newtonian:

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