Year 8 Physics: Light and Reflection Worksheet

Lower Secondary · Year 8 · Light, reflection, refraction and colour

Name: ..... **Class:** ..... **Date:** ..... **Score:** / 41

Section A: How light travels [11 marks]

luminous | transparent | translucent | opaque | shadow | straight lines | 300 000 km/s | reflect

1 Use words from the box to complete the sentences.

(a) Light travels in ..... . It travels at about ..... in a vacuum. **[2]**

(b) Objects that give out their own light are ..... . Other objects are seen because they ..... light into our eyes. **[2]**

(c) A ..... material lets all light through, a ..... material lets some light through and an ..... material lets none through. **[3]**

2 Explain how a shadow is formed. **[2]**

.....

.....

3 A torch is moved closer to a card with a hole shape. Describe what happens to the size of the shadow and why. **[2]**

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Section B: Reflection [13 marks]

4 Complete the sentences about the law of reflection. **[3]**

Statement	Answer
The line at 90° to the mirror is called the	
The angle between the incoming ray and the normal is the angle of	
The angle of incidence is ..... to the angle of reflection	

5 A ray hits a plane mirror with an angle of incidence of 35°. State the angle of reflection and the angle between the incident ray and the mirror surface. **[2]**

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.....

6 Describe the image formed in a plane mirror. **[3]**

7 Explain the difference between a smooth surface and a rough surface when light hits them. **[3]**

8 Why does a sheet of white paper not act as a mirror? **[2]**

Section C: Refraction and colour [12 marks]

9 Describe what happens to a ray of light when it passes from air into glass at an angle. **[3]**

10 A pencil in a glass of water looks bent. Explain why. **[2]**

11 Describe what happens when white light passes through a prism. Name the colours in order. **[4]**

12 Explain why a red shirt looks red in white light but black in green light. **[3]**

Section D: Seeing and applications [5 marks]

13 Describe how we see a non-luminous object such as a book. **[3]**

14 Give two uses of mirrors in everyday life. **[2]**