A8 · The eye and how we see · Worked examples and practice

Name: _____ Date: _____

Worked examples

Read these first. There is one for each kind of question in this lesson.

Example 1 · Trace light through the eye

List the parts light passes on its way to the retina, in order.

1. Light enters through the cornea and is bent.
2. It passes through the pupil.
3. The lens focuses it.
4. It reaches the retina.

Answer: Cornea, pupil, lens, retina.

Example 2 · Name a vision defect and its correction

A person sees far objects clearly but cannot read small print. Name the defect and the correcting lens.

1. The person sees far objects clearly, so the person is farsighted.
2. This is hyperopia: the eyeball is too short.
3. A convex lens bends light inward.

Answer: Hyperopia, corrected by a convex lens.

Practice

Questions 1 to 4 are easy. Questions 5 to 8 are medium. Questions 9 and 10 are harder.

EASY

1. Name the white outer layer of the eye.

EASY

2. Name the opening in the middle of the iris.

EASY

3. Name the photoreceptors that detect colour.

EASY

4. Name the nerve that carries action potentials from the retina to the brain.

MEDIUM

5. State the job of the choroid.

MEDIUM

6. Explain what the iris does in bright light.

MEDIUM

7. Explain why you cannot see colours well in very dim light.

MEDIUM

8. Explain what accommodation is.

HARDER

9. A hiker looks at a far mountain and then at a map in her hand. Describe what the ciliary muscle and the lens do. Explain why.

HARDER

10. A person has myopia. Describe where light meets in the eye without glasses, and explain how a concave lens corrects this.