

## **Light and Optical Systems**

### **Topic 5 - Extending Human Vision Practice Quiz**

1. Telescopes use different types of mirrors to collect the rays of light. The type of telescope that uses a concave mirror to collect the rays of light from distant objects is the ...

**reflecting telescope**

**refracting telescope**

**prism telescope**

**magnifying telescope**

2. A binocular uses prisms to redirect light from distant objects. These prisms act like ...

**concave lenses**

**convex lenses**

**plane mirrors**

**refracting mirrors**

3. In order to have the greatest magnification possible in a reflecting telescope, it is necessary to have a ...

**very large concave mirror**

**very thick objective lens**

**very strong plane mirror**

**great distance between the object and the image**

4. Magnifying glasses are used to make object look bigger than they usually are. New developments and discoveries have been able to make magnifying instruments (known as microscopes) much stronger. When Anton van Leeuwenhoek was able to see bacteria, for the first time, the magnification he needed was about ...

**200X**

**280X**

**1800X**

**2000X**

5. Microscopes have limits in terms of their magnification because of the types of lenses that are used. To magnify objects by different amounts, scientists would use this part of the compound microscope.

**objective lens**

**eyepiece lens**

**condenser lens**

**adjustment lens**

**Check your  
Answers**

## Light and Optical Systems

### Topic 5 - Extending Human Vision Practice Quiz (Answers)

1. Telescopes use different types of mirrors to collect the rays of light. The type of telescope that uses a concave mirror to collect the rays of light from distant objects is the ...

**reflecting telescope (Text p. 222) Figure 3.41A**

**refracting telescope**

**prism telescope**

**magnifying telescope**

2. A binocular uses prisms to redirect light from distant objects. These prisms act like ...

**concave lenses**

**convex lenses**

**plane mirrors (Text p. 223) prisms serve as plane mirrors**

**refracting mirrors**

3. In order to have the greatest magnification possible in a reflecting telescope, it is necessary to have a ...

**very large concave mirror**

**very thick objective lens**

**very strong plane mirror**

**great distance between the object and the image (Text p. 222) The farther away the image from the mirror, the greater the magnification**

4. Magnifying glasses are used to make object look bigger than they usually are. New developments and discoveries have been able to make magnifying instruments (known as microscopes) much stronger. When Anton van Leeuwenhoek was able to see bacteria, for the first time, the magnification he needed was about ...

**200X**

**280X (Text p. 224) To see bacteria it had to have been 280X**

**1800X**

**2000X**

5. Microscopes have limits in terms of their magnification because of the types of lenses that are used. To magnify objects by different amounts, scientists would use this part of the compound microscope.

**objective lens (Text p. 224) Figure 3.43 - Go back to Unit 2 - p. 107**

**eyepiece lens**

**condenser lens**

**adjustment lens**