Walmart’s Binoculars
Background

• **History**

The first binocular was a telescope invented by J. P. Lemiere in 1825. The modern prism binocular began with Ignatio Porro’s 1854 Italian patent for a prism erecting system. Binoculars are really two small prismatic telescopes joined together.
Background

- **Design**
  Binoculars are named for the prisms they use. A ‘Porro-Prism,’ uses a pair of right angle prisms to rotate the image. This is the standard, wide-body found in most binoculars.
Background

- **Telescopes vs. Binoculars**
  With a telescope, it is usually necessary to close one eye in order to view a target. Using just one eye makes visual perception hard and does not present a three-dimensional image like binoculars.
Applications

- **Use**
  Binoculars are used for land surveys and geographic data collection, bird watching, and amateur astronomy.

- **Hand-held binoculars** range from small 3 × 10 Galilean opera glasses, used in theaters, to glasses with 7 to 12 times magnification for typical outdoor use.
Ozark Trail binoculars are made with:

- 21mm optics that offer surprising details even in low-light.
- A porro prism design
- 8x magnification power
- Easy-to-grip housing
- Comfortable rubberized eyecups
- Diopter compensation.

Ozark Trail 8x21 Lightweight Binocular, Black, Walmart, $7.86
Barska 20-140x80 Gladiator Zoom Binoculars includes:

- A built-in tripod mounting post, carrying case, neck strap, lens covers and lens cloth
- Porro prisms made of BAK-4 glass
- Exit pupil measures 4 millimeters and the eye relief is 21mm
- Weigh 4.65 lbs