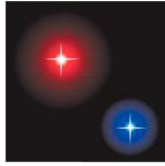




Name _____ Class _____ Date _____

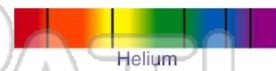
1 As an astronomer observes the night sky, one star appears to be **red** and another **blue**. What does this mean?



- A The red star is hot and the blue star is cool.
- B The red star is cool and the blue star is hot.
- C They are at different distances from the earth causing different colors.
- D The earth's atmosphere "bends" the light so it looks red and blue.

2 The **composition** of stars is the list of elements that make up that star. The composition of a star is determined by studying the light the star gives off. Which of the following **instruments** helps scientists analyze the composition of stars?

- A a jolly balance
- B a barometer
- C a spectrograph
- D a telescope



3 Stars have been **classified** since the 1800s. Then, they were **classified** based on the elements determined to be in the stars based on spectrograph studies. **Today, stars are classified based on their** _____.

- A composition
- B temperature



4 Ancient astronomers tried to categorize the brightness of stars by standing under the night sky and observing. Today we know that **brightness** depends in part on that star's **distance** from the earth. **How bright a star appears to look to observers on earth is called the star's** _____.

- A absolute magnitude
- B apparent magnitude



PREVIEW

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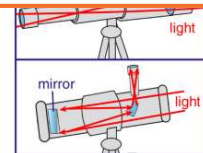
7

- A 150,000 km
- B 150,000,000 km
- C 1.5 billion km
- D over 4.7×10^{15} km



Refracting telescopes use **mirrors** to gather and focus light.

- A true
- B false



9 When using a reflecting or refracting telescopes, why is it **best** to place use the telescope on a **mountain top**?

- A this gets the telescope closer to the stars
- B a mountain top is away from lights and pollution
- C the air is thinner
- D both b and c



10 The earth's atmosphere blocks out certain types of rays. Which of the following types of telescopes can only work in orbit **outside** of the earth's **atmosphere**?

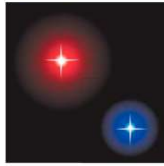
- A refracting telescope
- B reflecting telescope
- C x-ray telescope
- D radio telescope





ANSWER KEY

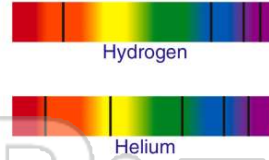
As an astronomer observes the night sky, one star appears to be **red** and another **blue**. What does this mean?



- A** The red star is hot and the blue star is cool.
- B** The red star is cool and the blue star is hot.
- C** They are at different distances from the earth causing different colors.
- D** The earth's atmosphere "bends" the light so it looks red and blue.

(b)

The **composition** of stars is the list of elements that make up that star. The composition of a star is determined by studying the light the star gives off. Which of the following **instruments** helps scientists analyze the composition of stars?



- A** a jolly balance
- B** a barometer
- C** a spectrograph
- D** a telescope

(c)

Stars have been **classified** since the 1800s. Then, they were classified based on the elements determined to be in the stars based on spectrograph studies. **Today, stars are classified based on their** _____.



- A** composition
- B** temperature
- C** distance from the earth
- D** brightness

(b)

Ancient astronomers tried to categorize the brightness of stars by standing under the night sky and observing. Today we know that **brightness** depends in part on that star's **distance** from the earth. **How bright a star appears to look to observers on earth is called the star's** _____.



- A** absolute magnitude
- B** apparent magnitude
- C** first magnitude

(b)



PREVIEW

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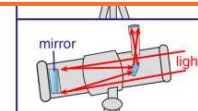
- A** 100,000,000 km
- B** 1.5 billion km
- C** 1.5 billion km
- D** over 4.7×10^{15} km



Earth

focus light.
True or false?

- A** true
- B** false



When using a reflecting or refracting telescopes, why is it **best** to place use the telescope on a **mountain top**?

- A** this gets the telescope closer to the stars
- B** a mountain top is away from lights and pollution
- C** the air is thinner
- D** both b and c



(d)

The earth's atmosphere blocks out certain types of rays. Which of the following types of telescopes can only work in orbit **outside** of the earth's **atmosphere**?

- A** refracting telescope
- B** reflecting telescope
- C** x-ray telescope
- D** radio telescope



(c)