Example Items

Astronomy

Astronomy Example Items are a **representative set** of items for the ACP. Teachers may use this set of items along with the test blueprint as guides to prepare students for the ACP. On the last page, the correct answer, content SE and SE justification are listed for each item.

The specific part of an SE that an Example Item measures is NOT necessarily the only part of the SE that is assessed on the ACP. None of these Example Items will appear on the ACP.

Teachers may provide feedback regarding Example Items.

(1) Download the Example Feedback Form and email it. The form is located on the homepage of Assessment.dallasisd.org.

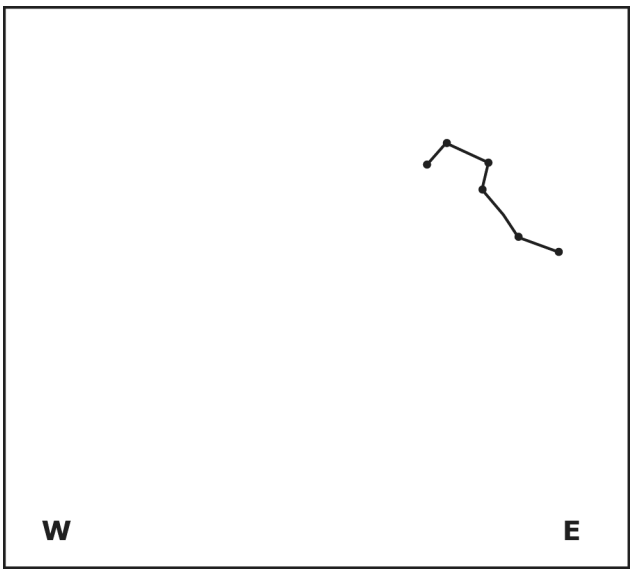
OR

(2) To submit directly, click "Example Feedback" **after** you login to the Assessment website.

First Semester
2018–2019
Code #: 3311

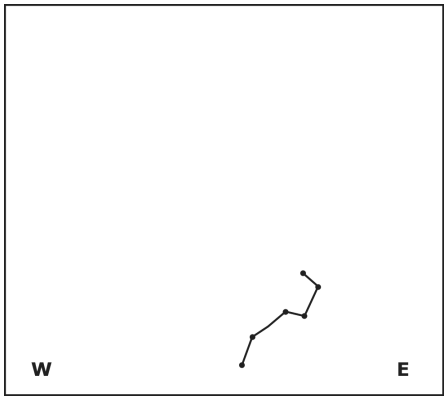
EXAMPLE ITEMS Astronomy, Sem 1

1 On March 21st at 9:00 pm, the Big Dipper appears as shown.

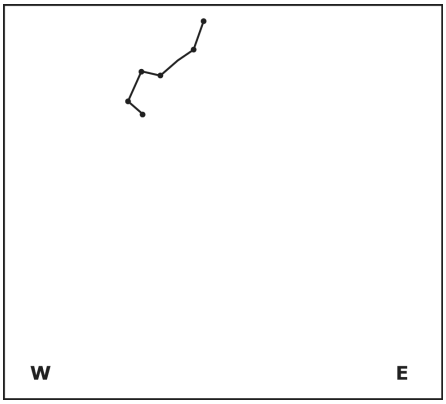


Where will the Big Dipper be six hours later?

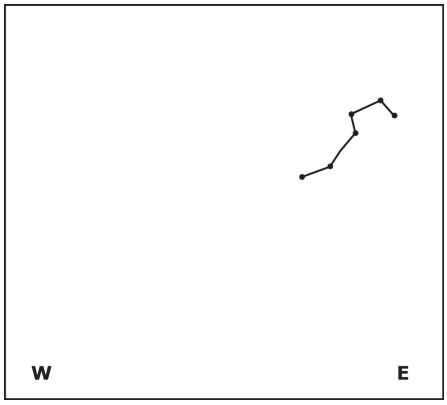
A



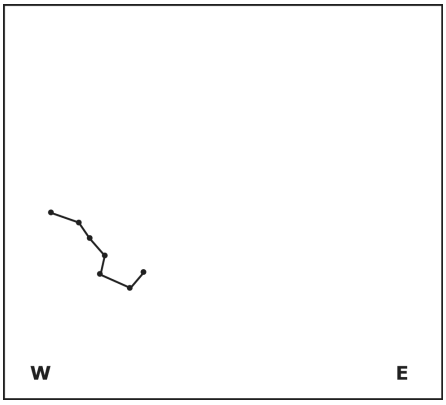
C



B



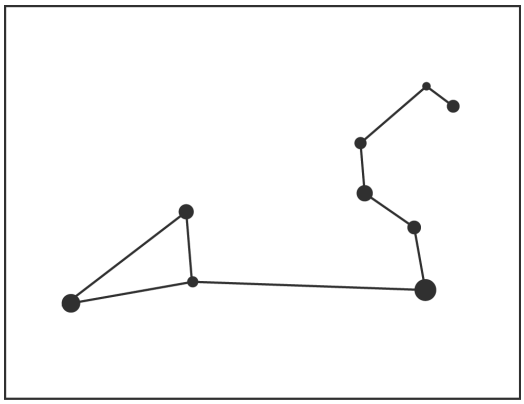
D



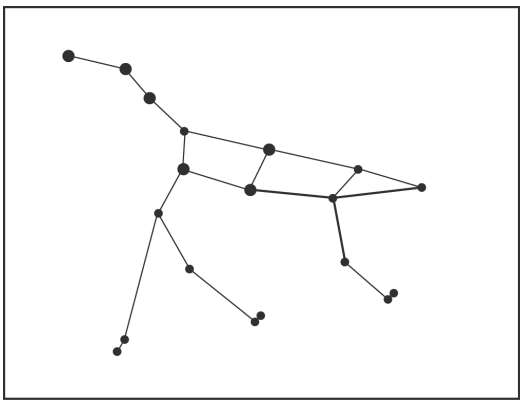
EXAMPLE ITEMS Astronomy, Sem 1

2 Which constellation is the zodiac constellation Leo, which passes behind the Sun at the beginning of August?

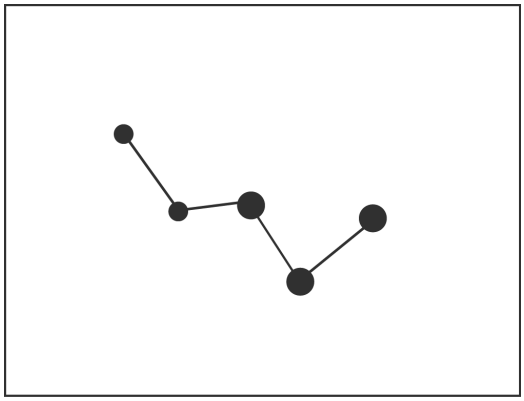
A



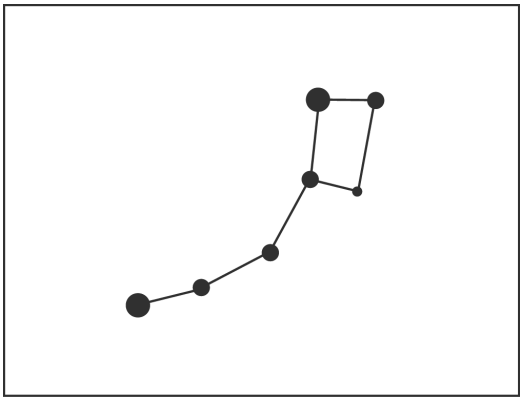
C



B



D



3 Patterns of stars in the night sky became known as constellations. Ancient civilizations, such as the Greeks and the Mayans, used these patterns for all the reasons shown except —

A determining when to plant and harvest crops

B categorizing star types and distances

C deciding where cities should be located

D navigating on land and by sea

4 The equator will always have —

A more daylight during December than during June

B more daylight during September than during March

C about 12 hours of daylight

D about 24 hours of daylight

Dallas ISD - Example Items

EXAMPLE ITEMS Astronomy, Sem 1

5 The table shows some of the data needed to make a scale model of the Earth-Moon System using a volleyball and a tennis ball.

	Diameter	Diameter	Distance Between
Earth-Moon System	Earth 8000 miles	Moon 2000 miles	Earth & Moon 240,000 miles
Model of the Earth-Moon System	Volleyball 8 inches	Tennis Ball 2 inches	Volleyball & Tennis Ball **?**

Which distance completes the data in the table?

A 24 inches (2 feet)

B 30 inches (2.5 feet)

C 120 inches (10 feet)

D 240 inches (20 feet)

6 Galileo's discovery of the moons of Jupiter, the phases of Venus, and the rotational period of the Sun all supported which theory of the solar system?

A The heliocentric model, first proposed by Ptolemy, where the Sun is the center of the solar system

B The heliocentric model, first proposed by Copernicus, where the Sun is the center of the solar system

C The geocentric model, first proposed by Ptolemy, in which the Earth is the center of the solar system

D The geocentric model, first proposed by Copernicus, in which the Earth is the center of the solar system

7 An astronomer observes two stars and finds that they have the same apparent magnitude. He shows his data to four other astronomers, and each of them suggests a hypothesis about the two stars. Which hypothesis cannot possibly be correct?

A Both stars are the same distance from the Earth and emit the same amount of energy.

B One star is farther from the Earth and emits more energy than the other one.

C Both stars have the same absolute magnitude and are the same distance from the Earth.

D One star has greater luminosity and is closer to the Earth than the other one.

EXAMPLE ITEMS Astronomy, Sem 1

8 Mercury orbits the Sun at approximately 0.33 AU. Approximately how close can Mercury and the Earth get to each other in astronomical units?

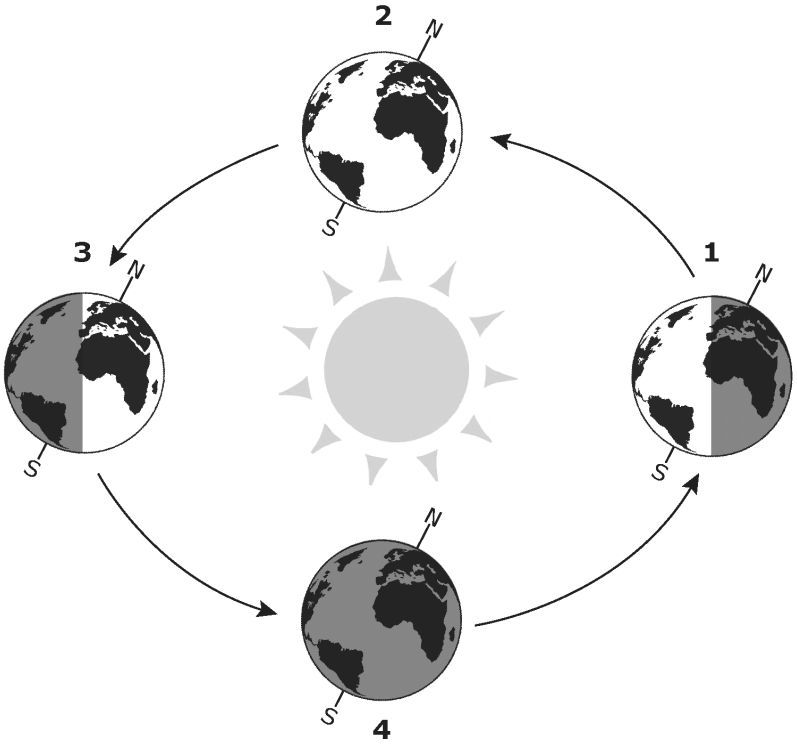
A 0.33 AU

B 0.67 AU

C 1.0 AU

D 1.33 AU

⇨ **Use the diagram to answer the next question.**



9 At which location does summer begin in the Southern Hemisphere?

A Location 1

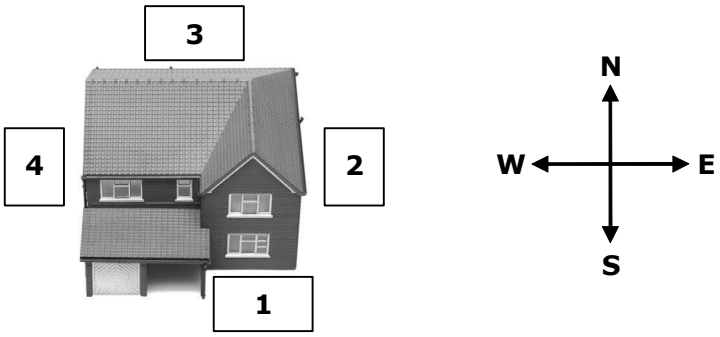
B Location 2

C Location 3

D Location 4

EXAMPLE ITEMS Astronomy, Sem 1

10 The figure shows a house located in Dallas (northern hemisphere).



In which location will a garden receive only indirect sunlight during winter months?

A Position 1

B Position 2

C Position 3

D Position 4

11 How does the Moon affect tides on Earth?

A Light from the Moon heats the oceans.

B The Moon’s gravity pulls the water in the oceans toward the Moon.

C The Moon’s gravity pushes the water in the oceans away from the Moon.

D The low temperature on the Moon’s surface cools the oceans.

12 The difference in the purpose of conventional ground-based optical telescopes and ground-based radio telescopes is —

A the wavelength of radiation the telescopes are used to observe

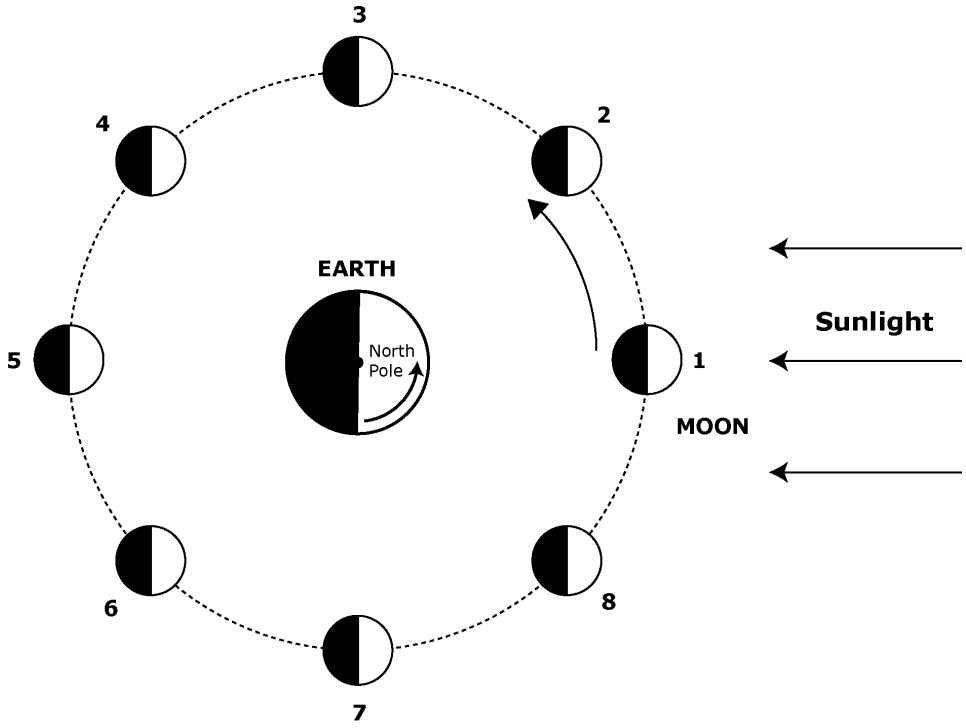
B the different planets the telescopes are used to observe

C that one is only used to search for life in the Milky Way Galaxy

D that one is only used to study the solar system

EXAMPLE ITEMS Astronomy, Sem 1

13 The figure shows how the Moon is lit as it orbits the Earth.



At which position(s) does the Moon appear in its third-quarter phase?

A 3 and 7

B 4 and 8

C 7 only

D 8 only

14 On which date is the Sun directly over the Tropic of Cancer at noon?

A March 21

B June 21

C September 21

D December 21

15 One reason that reflective telescopes are more commonly used in space technology is that —

A they avoid the problem of chromatic aberration

B refractive lenses will not work in space because there is no air

C refractive lenses melt in space because they absorb energy

D they use mirrors, which produce perfect images

Dallas ISD - Example Items

EXAMPLE ITEMS Astronomy Key, Sem 1

Item#	Key	SE	Process Skills	SE Justification
1	C	ASTRO.5B	2G	Observe the apparent movement of the stars in the nighttime sky.
2	A	ASTRO.5C	--	Recognize and identify constellations such as the constellations of the zodiac.
3	B	ASTRO.4C	3D	Describe the historical origins of the perceived patterns of constellations.
4	C	ASTRO.8B	--	Explain how latitudinal position affects the length of day throughout the year.
5	D	ASTRO.6A	2G	Compare the scale, size, and distance of the Sun, Earth, and Moon system through the use of data and modeling.
6	B	ASTRO.4B	3A, 3D	Describe the contributions of scientists, including Galileo, to our changing understanding of astronomy.
7	D	ASTRO.6D	--	Relate apparent versus absolute magnitude to the distances of celestial objects.
8	B	ASTRO.6E	2G	Demonstrate the use of units of measurement in astronomy, including Astronomical Units.
9	A	ASTRO.8A	--	Recognize that seasons are caused by the tilt of Earth's axis.
10	C	ASTRO.5A	2G, 2E	Observe and record the apparent movement of the Sun during the day.
11	B	ASTRO.7D	--	Identify the effects of the Moon on tides.
12	A	ASTRO.14C	--	Analyze the importance of ground-based technology in astronomical studies.
13	C	ASTRO.7B	--	Illustrate the cause of lunar phases by showing positions of the Moon relative to Earth and the Sun for each phase, including new moon, waxing crescent, first quarter, waxing gibbous, full moon, waning gibbous, third quarter, and waning crescent.
14	B	ASTRO.8D	--	Examine the relationship of the seasons to the tropics.
15	A	ASTRO.14D	--	Recognize the importance of space telescopes to the collection of astronomical data across the electromagnetic spectrum.