

Integrated Science 8th edition Tillery Test Bank

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Integrated Science 8th Edition by Tillery CH01

ANSWERS ARE LOCATED IN THE SECOND PART OF THIS DOCUMENT

TRUE/FALSE - Write 'T' if the statement is true and 'F' if the statement is false.

1) A referent is a familiar object one can use to describe a property of a different object.

1) _____

- ☐ true
- ☐ false

Question Details

Bloom's : 3. Apply

Section : 01.01

Topic : Objects and Properties

Accessibility : Keyboard Navigation

Chapter : 01

2) The property of mass is a measure of how heavy an object is.

2) _____

- ☐ true
- ☐ false

Question Details

Bloom's : 2. Understand

Section : 01.04

Topic : Standard Units of Measurement

Accessibility : Keyboard Navigation

Chapter : 01

3) Pseudoscience fails to conform to repeated fair tests.

3) _____

- ☐ true
- ☐ false

Question Details

Bloom's : 2. Understand

Section : 01.08

Topic : Science, Nonscience, and Pseudoscience

Accessibility : Keyboard Navigation

Chapter : 01

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- 4) A 100 g piece of iron has twice the volume as a 50 g piece of iron.

4) _____

- ☐ true
☐ false

Question Details

Topic : Standard Units of Measurement

Bloom's : 4. Analyze

Section : 01.06

Accessibility : Keyboard Navigation

Chapter : 01

- 5) The mass of 1000 cm³ of water in a tall glass is a kilogram.

5) _____

- ☐ true
☐ false

Question Details

Topic : Standard Units of Measurement

Bloom's : 4. Analyze

Section : 01.06

Accessibility : Keyboard Navigation

Chapter : 01

- 6) The density of a 100 g piece of iron is twice as great as the density of a 50 g piece of iron.

6) _____

- ☐ true
☐ false

Question Details

Topic : Standard Units of Measurement

Bloom's : 4. Analyze

Section : 01.06

Accessibility : Keyboard Navigation

Chapter : 01

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7) A scientific law describes how certain parts of nature are consistently observed to act.

7) _____

- ☐ true
- ☐ false

Question Details

Bloom's : 2. Understand

Section : 01.07

Topic : Nature of Science

Accessibility : Keyboard Navigation

Chapter : 01

8) The symbol $\propto$ has the meaning of "is proportional to."

8) _____

- ☐ true
- ☐ false

Question Details

Topic : Standard Units of Measurement

Section : 01.06

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

9) In science, the word *theory* refers to a set of related hypotheses that have been shown to be correct by many experiments.

9) _____

- ☐ true
- ☐ false

Question Details

Bloom's : 2. Understand

Section : 01.07

Topic : Nature of Science

Accessibility : Keyboard Navigation

Chapter : 01

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10) The symbol " Δ " is used to refer to an object's density.

10) _____

- ☐ true
- ☐ false

Question Details

Topic : Standard Units of Measurement

Section : 01.06

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

MULTIPLE CHOICE - Choose the one alternative that best completes the statement or answers the question.

11) Equations are shorthand statements used to

11) _____

- A) describe a property.
- B) define a concept.
- C) describe how quantities change together.
- D) All of the choices are correct.

Question Details

Topic : Standard Units of Measurement

Bloom's : 3. Apply

Section : 01.06

Accessibility : Keyboard Navigation

Chapter : 01

12) Measured properties that can have different values at different times are

12) _____

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- A) the result of measurement errors.
- B) impossible.
- C) called variables.
- D) called scientific flukes.

Question Details

Bloom's : 2. Understand

Topic : Standard Units of Measurement

Section : 01.06

Accessibility : Keyboard Navigation

Chapter : 01

13) If equation $V = tk$ is used to describe the relationship between how much fuel a gas tank can hold and the time required to fill it, the symbol " k "

13) _____

- A) has units of min/gal.
- B) is a variable.
- C) is a proportionality constant.
- D) depends on the length of time.

Question Details

Topic : Standard Units of Measurement

Bloom's : 4. Analyze

Section : 01.06

Accessibility : Keyboard Navigation

Chapter : 01

14) When two variables increase or decrease together in the same ratio they

14) _____

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- A) are in direct proportion.
- B) are in inverse proportion.
- C) can have numerical value only.
- D) must have both value and units.

Question Details

Bloom's : 2. Understand

Topic : Standard Units of Measurement

Section : 01.06

Accessibility : Keyboard Navigation

Chapter : 01

15) Measurement is the process of comparing a _____ to a well-defined _____.

15) _____

- A) finding; result
- B) unit; referent
- C) property; referent
- D) result; variable

Question Details

Bloom's : 2. Understand

Section : 01.04

Topic : Standard Units of Measurement

Accessibility : Keyboard Navigation

Chapter : 01

16) Which one of the following is *not* a fundamental property?

16) _____

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- A) length
- B) weight
- C) time
- D) mass

Question Details

Bloom's : 2. Understand

Section : 01.04

Topic : Standard Units of Measurement

Accessibility : Keyboard Navigation

Chapter : 01

17) Suppose a cube of Jello is cut into two pieces. What property stays the same comparing the original piece with one of the new pieces?

17) _____

- A) mass
- B) volume
- C) density
- D) surface area

Question Details

Section : 01.04

Topic : Standard Units of Measurement

Bloom's : 4. Analyze

Accessibility : Keyboard Navigation

Chapter : 01

18) A scientific model can be

18) _____

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- A) a smaller or larger scale representation of a larger system.
- B) a computerized visualization showing how parts interact.
- C) a mathematical relationship used to predict how a system will behave.
- D) All of the choices are correct.

Question Details

Bloom's : 4. Analyze

Section : 01.07

Topic : Nature of Science

Accessibility : Keyboard Navigation

Chapter : 01

19) Which measure in the metric system is defined by using an object for a referent?

19) _____

- A) length
- B) mass
- C) time
- D) charge

Question Details

Bloom's : 2. Understand

Section : 01.04

Topic : Standard Units of Measurement

Accessibility : Keyboard Navigation

Chapter : 01

20) The property of volume is a measure of

20) _____

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- A) how much matter an object contains.
- B) the compactness of matter in a given space.
- C) the extent of the surface of an object.
- D) how much space an object occupies.

Question Details

Bloom's : 2. Understand

Topic : Standard Units of Measurement

Section : 01.06

Accessibility : Keyboard Navigation

Chapter : 01

21) The basic means of acquiring understanding in the sciences is

21) _____

- A) logical, well-thought-out conclusions.
- B) thinking about facts that you can observe.
- C) experimental evidence.
- D) defined by a series of five steps called the scientific method.

Question Details

Bloom's : 2. Understand

Section : 01.07

Topic : Nature of Science

Accessibility : Keyboard Navigation

Chapter : 01

22) Experiments that repeatedly show the same results consistently are best described as being

22) _____

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- A) valid.
- B) conclusive.
- C) reliable.
- D) weird.

Question Details

Bloom's : 3. Apply

Section : 01.07

Topic : Nature of Science

Accessibility : Keyboard Navigation

Chapter : 01

23) A carefully constructed scientific explanation which requires further experimentation is called a

23) _____

- A) theory.
- B) hypothesis.
- C) model.
- D) principle.

Question Details

Bloom's : 2. Understand

Section : 01.07

Topic : Nature of Science

Accessibility : Keyboard Navigation

Chapter : 01

24) Measurement is used to accurately

24) _____

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- A) describe an object or event.
- B) compare objects or events over a period of time.
- C) find relationships that occur in nature.
- D) All of the choices are correct.

Question Details

Bloom's : 2. Understand

Section : 01.04

Topic : Standard Units of Measurement

Accessibility : Keyboard Navigation

Chapter : 01

25) Imagine a 10 g chunk of aluminum ($\rho = 2.7 \text{ g/cm}^3$) and a 10 g chunk of iron ($\rho = 7.9 \text{ g/cm}^3$). Which of the following is true?

25) _____

- A) The chunk of iron is smaller than the chunk of aluminum.
- B) The chunk of iron is more massive than the chunk of aluminum.
- C) The chunk of aluminum is smaller than the chunk of iron.
- D) Both objects have the same volume.

Question Details

Section : 01.04

Topic : Standard Units of Measurement

Bloom's : 4. Analyze

Accessibility : Keyboard Navigation

Chapter : 01

26) The SI standard unit for mass is the

26) _____

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- A) pound.
- B) newton.
- C) kilogram.
- D) mole.

Question Details

Bloom's : 2. Understand

Section : 01.04

Topic : Standard Units of Measurement

Accessibility : Keyboard Navigation

Chapter : 01

27) The metric measurement that means one-hundredth of a meter is one

27) _____

- A) decimeter.
- B) hectoliter.
- C) centimeter.
- D) milligram.

Question Details

Section : 01.04

Topic : Standard Units of Measurement

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

28) Measurement information used to describe something is called

28) _____

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- A) a referent.
- B) a value.
- C) data.
- D) a unit.

Question Details

Bloom's : 2. Understand

Section : 01.04

Topic : Standard Units of Measurement

Accessibility : Keyboard Navigation

Chapter : 01

29) When describing the amount of matter that composes a rock of a particular volume, which of the following units does **not** describe the rock's density?

29) _____

- A) g/cm^3
- B) L/kg
- C) g/ml
- D) kg/dm^3

Question Details

Topic : Standard Units of Measurement

Bloom's : 4. Analyze

Section : 01.06

Accessibility : Keyboard Navigation

Chapter : 01

30) What happens to the measured intensity of car headlights if you move from a distance of 10 m away to a new distance of 20 m?

30) _____

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- A) $\frac{1}{2}$
- B) $\frac{1}{4}$
- C) $\frac{1}{3}$
- D) $\frac{1}{9}$

Question Details

Topic : Standard Units of Measurement

Bloom's : 3. Apply

Section : 01.06

Accessibility : Keyboard Navigation

Chapter : 01

31) Misleading people into believing that something is supported by repeated fair tests when it does not is

31) _____

- A) basic science.
- B) applied science.
- C) natural science.
- D) pseudoscience.

Question Details

Bloom's : 2. Understand

Section : 01.08

Topic : Science, Nonscience, and Pseudoscience

Accessibility : Keyboard Navigation

Chapter : 01

32) What is the proportional relationship between the number of cookies in a cookie jar and the time you have been eating the cookies?

32) _____

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- A) direct
- B) inverse
- C) square
- D) inverse square

Question Details

Topic : Standard Units of Measurement

Bloom's : 3. Apply

Section : 01.06

Accessibility : Keyboard Navigation

Chapter : 01

33) A movie projector makes a 1 m by 1 m image when projecting 1 m from a screen, a 2 m by 2 m image when projecting 2 m from the screen, and a 3 m by 3 m image when projecting 3 m from the screen. What is the proportional relationship between the distance from the screen and the area of the image?

33) _____

- A) direct
- B) inverse
- C) square
- D) inverse square

Question Details

Topic : Standard Units of Measurement

Bloom's : 3. Apply

Section : 01.06

Accessibility : Keyboard Navigation

Chapter : 01

34) A car uses 1 gallon of gasoline to travel 10 miles, 2 gallons of gasoline to travel 20 miles, and 3 gallons of gasoline to travel 30 miles. What is the proportional relationship between the gallons of gasoline used and the distance a car can travel?

34) _____

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- A) direct
- B) inverse
- C) square
- D) inverse square

Question Details

Topic : Standard Units of Measurement

Bloom's : 3. Apply

Section : 01.06

Accessibility : Keyboard Navigation

Chapter : 01

35) A student believes that cobwebs form from dust since they always seem to appear when housekeeping chores are ignored. This student has made a statement that is

35) _____

- A) a hypothesis.
- B) conjecture.
- C) a scientific law.
- D) theory.

Question Details

Bloom's : 2. Understand

Section : 01.07

Topic : Nature of Science

Accessibility : Keyboard Navigation

Chapter : 01

36) After years of observing, a homemaker concluded "Ugly rugs never wear out." This person has made a statement that is

36) _____

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- A) a hypothesis.
- B) conjecture.
- C) a scientific law.
- D) theory.

Question Details

Bloom's : 2. Understand

Section : 01.07

Topic : Nature of Science

Accessibility : Keyboard Navigation

Chapter : 01

37) According to the scientific method, what needs to be done to move beyond conjecture or simple hypotheses in a person's understanding of their physical surroundings?

37) _____

- A) Make an educated guess.
- B) Conduct a controlled experiment.
- C) Find an understood model with answers.
- D) Search for answers on the Internet.

Question Details

Bloom's : 2. Understand

Section : 01.07

Topic : Nature of Science

Accessibility : Keyboard Navigation

Chapter : 01

38) In general, scientific investigations have which activities in common?

38) _____

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- A) state problem, gather data, make hypothesis, test, make conclusion
- B) collect observations, develop explanations, test explanations
- C) observe nature, reason an explanation for what is observed
- D) observe nature, collect data, modify data to fit scientific model

Question Details

Bloom's : 2. Understand

Section : 01.07

Topic : Nature of Science

Accessibility : Keyboard Navigation

Chapter : 01

39) A 1 kilometer length is the same as how many meters?

39) _____

- A) 0.001
- B) 0.01
- C) 10
- D) 1000

Question Details

Section : 01.05

Topic : Metric Prefixes

Bloom's : 1. Remember

Accessibility : Keyboard Navigation

Chapter : 01

40) One-half liter of water is the same volume as

40) _____

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- A) 5000 mL.
- B) 0.5 cc.
- C) 500 cm³.
- D) 5 dm³.

Question Details

Bloom's : 2. Understand

Section : 01.05

Topic : Metric Prefixes

Accessibility : Keyboard Navigation

Chapter : 01

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Answer Key

Test name: CH01

- 1) TRUE
- 2) FALSE
- 3) TRUE
- 4) TRUE
- 5) TRUE
- 6) FALSE
- 7) TRUE
- 8) TRUE
- 9) TRUE
- 10) FALSE
- 11) D
- 12) C
- 13) C
- 14) A
- 15) C
- 16) B
- 17) C
- 18) D
- 19) B
- 20) D
- 21) C
- 22) C
- 23) B
- 24) D
- 25) A
- 26) C

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- 27) C
- 28) C
- 29) B
- 30) B
- 31) D
- 32) B
- 33) C
- 34) A
- 35) B
- 36) A
- 37) B
- 38) B
- 39) D
- 40) C