

7th Grade, Week 5/11-5/15 Due: 5/18

Monday:

Math- Khan Academy (25 pts)

Why we divide by $n-1$ in variance (5pts, video)

Simulation showing bias in sample variance (5pts, video)

Simulation providing evidence that $(n-1)$ gives us an unbiased estimate (5pts, video)

Unbiased estimate of population variance (5pts, article)

Review and intuition why we divide by $n-1$ for unbiased sample variance (5pts, video)

Tuesday: Virtual Meeting at 10:00am

Math- Khan Academy (19 pts)

Worked example: Creating a box plot (odd number of data points) (5pts, video)

Worked example: Creating a box plot (even number of data points) (5pts, video)

Constructing a box plot (5pts, video)

Creating box plots (4pts, exercise)

Science- Work on Chpt 12 Test

History- Lesson 11.2 read pgs 524-530 Complete reading strategy and turn in

Wednesday:

Math- Khan Academy (23 pts)

Reading box plots (5pts, video)

Reading box plots (4pts, exercise)

Interpreting box plots (5pts, video)

Interpreting quartiles (4pts, exercise)

Box plot review (5pts, article)

Thursday:

Math- Khan Academy (19 pts)

Judging outliers in a dataset (5pts, video)

Identifying outliers (4pts, exercise)

Identifying outliers with the $1.5 \times IQR$ rule (5pts, article)

Range and mid-range (5pts, video)

Science- Finish Chpt 12 Test

History- Read pg 527 and write a paragraph answering "Then and Now"

Friday:

Math- Khan Academy (63 pts)

Mean absolute deviation (MAD) (5pts, video)

Mean absolute deviation example (5pts, video)

Mean absolute deviation (MAD) (4pt, exercise)

Mean absolute deviation (MAD) review (5pts, article)

Summarizing quantitative data: Quiz 4 (10pts)

Summarizing quantitative data: Unit test (24pts)

Chapter Test A The Ear and Sound

Part A. Multiple Choice

Directions: *In the space at the left, write the letter of the term or phrase that correctly answers each question.*

- _____ 1. What types of waves are sound waves?
 A. particle
 B. transverse
 C. mechanical
 D. compression
- _____ 2. What type of hearing loss is usually associated with a middle-ear infection?
 A. cochlear
 B. permanent
 C. conductive
 D. sensorineural
- _____ 3. What does amplitude influence?
 A. the amount of speed in a wave
 B. the amount of energy in a wave
 C. the amount of rarefaction in a wave
 D. the amount of compression in a wave

Part B. Matching

Directions: *Write the letter of the correct term on the line next to its description.*

Matching Set 1

- | | |
|--|------------------|
| _____ 1. a person's perception of how much energy a sound wave carries | A. pitch |
| _____ 2. measures the amount of energy in a sound wave | B. loudness |
| _____ 3. how high or low a sound is | C. decibel scale |

Matching Set 2

- | | |
|---|-----------------|
| _____ 4. bone shaped like a hammer in the middle ear | D. malleus |
| _____ 5. made up of folds of cartilage and skin that help sound waves enter the ear | E. eardrum |
| _____ 6. thin layer of skin that vibrates when sound waves hit it | F. external ear |

Content Vocabulary CONTINUED

Directions: On the line in front of each ear structure below, write the letter of the part of the ear where the structure is found.

- | | | |
|---|---------------|--------------|
| A. outer ear | B. middle ear | C. inner ear |
| _____ 14. tympanic membrane | | |
| _____ 15. incus | | |
| _____ 16. cochlea | | |
| _____ 17. folds and cartilage and skin visible on either side of the head | | |
| _____ 18. auditory canal | | |
| _____ 19. stapes | | |

Directions: Fill in the blanks with the correct terms from the list below.

- | | | | |
|-------------------------|----------------------------|--------------|------------------|
| amplitude | brain | cochlea | compression wave |
| conductive hearing loss | dB | echolocation | pitch |
| rarefaction | sensorineural hearing loss | vibrations | |

20. Bats use _____ to hunt.
21. The _____ contains sensory cells with little hairs sticking out of them.
22. The symbol for a decibel is _____.
23. Signals sent from sensory cells in the cochlea travel to the _____.
24. _____ can only be corrected through the use of a hearing aid.
25. In a(n) _____, particles move back and forth in the same direction as the wave travels.
26. _____ can occur when a fluid buildup in the ear puts pressure on the eardrum.
27. A sound wave with a small _____ carries little energy and is quiet.
28. All sounds are caused by _____.
29. The words *frequency* and _____ can be used interchangeably—both can be used to describe how high or low a sound is.
30. A sound wave creates regions of compression and regions of _____ as it moves through the air.

Chapter Review

The Ear and Sound

CHAPTER 12

Part A. Vocabulary Review

Directions: Circle the correct choice from the two options listed in parentheses to complete each sentence.

1. The malleus bone in the inner ear is also known as the (hammer/anvil).
2. Sound waves are (surface waves/compression waves).
3. Of the three bones in the middle ear, the one that is also referred to as the anvil is the (incus/cochlea).
4. The first part of the middle ear that sound waves reach is the (auditory canal/tympanic membrane).
5. The malleus, incus, and (cochlea/stapes) rest in a fluid-filled vessel called the eustachian tube.
6. Because of the structure of the ear, not all sound waves with the same energy have the same (loudness/pitch).
7. A high-frequency sound is a high-(speed/pitch) sound.
8. The (external ear/middle ear) is made up of folds of skin and cartilage.
9. The (auditory canal/eustachian tube) is part of the outer ear.
10. Your perception of the amount of energy in a sound wave is measured on the (decibel scale/amplitude scale).
11. The loudness of a wave depends partly upon the (amplitude/magnitude) and partly upon the frequency of the sound wave.
12. The sensory cells in the (cochlea/tympanic membrane) sense different frequencies of sound.
13. A reflected sound wave is a(n) (rarefaction/echo).
14. A region of (compression/rarefaction) consists of tightly packed particles.

Part B. Concept Review

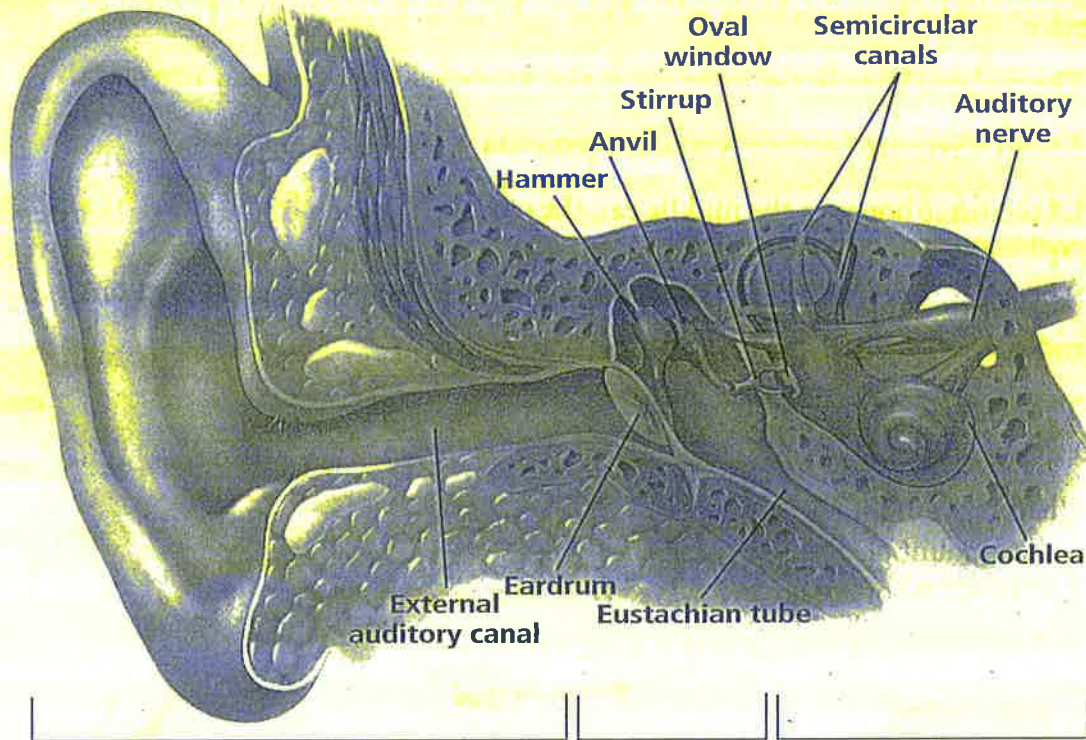
Directions: Respond to each question or statement in the space provided.

1. Compare and contrast conductive hearing loss and sensorineural hearing loss.

Chapter Test **A** CONTINUED

Part C. Labeling and Interpreting a Diagram

Directions: Use these terms to label the diagram below: inner ear, middle ear, outer ear. Use the diagram to answer each question.



1. _____
 2. _____
 3. _____

4. What is the function of part 1 in the diagram above? _____

5. What is the function of part 2 in the diagram above? _____