

# Charts, Graphs, Diagrams, and Timelines

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_ / 10



## Quick Review

Charts and graphs let you compare amounts quickly. Always read the title and labels first, then look at the numbers. The numbers in a chart should match the words in the article around it.

### PART 1 — READ

Read the passage. Then answer the questions.

## How Tall Are the Tallest Trees?

Trees can be amazingly tall. The tallest tree ever measured was a coast redwood in California named Hyperion, which stands about 380 feet high. To picture that, imagine a building with thirty-five floors. Different kinds of trees grow to very different heights, depending on where they live and what they need.

The chart below shows the tallest known height for five common trees in the United States. Use the chart to compare them.

### Chart: Tallest Known Heights of Common U.S. Trees (in feet)

Coast Redwood — 380 feet; Douglas Fir — 327 feet; Sitka Spruce — 317 feet; Sugar Pine — 273 feet; White Oak — 145 feet.

Most very tall trees grow in places that get plenty of rain and have rich soil. Coast redwoods, for example, live along the foggy coast of northern California, where moisture from the ocean keeps them watered all year. Douglas firs and Sitka spruces grow in the rainy Pacific Northwest. The white oak, which is shorter, grows in many places across the eastern United States—including drier areas where giant trees would not survive.

Trees can also live a long time. The bristlecone pine, found in the western mountains, is not very tall (around 50 feet), but some bristlecone pines are more than 4,800 years old. That is older than the pyramids of Egypt. Height is not the only sign of a great tree.

### PART 2 — PRACTICE

Use the article AND the chart of tree heights to answer the questions.

1. According to the chart, which tree is the TALLEST?
  - A. Douglas Fir at 327 feet
  - B. Sitka Spruce at 317 feet
  - C. Coast Redwood at 380 feet
  - D. Sugar Pine at 273 feet



2. According to the chart, which tree is the SHORTEST?
  - A. Coast Redwood
  - B. Douglas Fir
  - C. Sugar Pine
  - D. White Oak
3. About how much TALLER is the Coast Redwood than the White Oak?
  - A. About 53 feet taller
  - B. About 235 feet taller
  - C. About 525 feet taller
  - D. About 145 feet taller
4. Which two trees have the CLOSEST heights on the chart?
  - A. Douglas Fir and Sitka Spruce (10 feet apart)
  - B. Sugar Pine and White Oak (128 feet apart)
  - C. Coast Redwood and Sugar Pine (107 feet apart)
  - D. Coast Redwood and White Oak (235 feet apart)
5. Which sentence from the article MATCHES the chart's information about the tallest tree?
  - A. "The tallest tree ever measured was a coast redwood in California."
  - B. "Bristlecone pines are more than 4,800 years old."
  - C. "Trees can also live a long time."
  - D. "The white oak grows in many places across the eastern United States."
6. The bristlecone pine is NOT shown on the chart. What is the BEST explanation?
  - A. Bristlecone pines do not really exist in the United States.
  - B. The chart shows the TALLEST trees, and bristlecones at 50 feet are too short to belong.
  - C. Bristlecone pines grow only outside the United States.
  - D. Bristlecone pines are too tall to fit on a chart.
7. About how many TIMES taller is the Coast Redwood than the bristlecone pine described in the article?
  - A. About 2 times taller (because  $50 + 50 \approx 380$ )
  - B. About 4 times taller (because  $4 \times 50 = 200$ )
  - C. About 50 times taller (because the redwood is 50 feet)
  - D. About 7 times taller (because  $380 \div 50 \approx 7.6$ )



8. Which kind of visual would BEST show the AGE of the bristlecone pine compared with the pyramids of Egypt?

- A. A timeline that shows years
- B. A pie chart of tree types
- C. A bar chart of tree heights
- D. A diagram of tree roots

9. Use the chart AND the article TOGETHER. Which part of the United States would you expect to have the TALLEST trees, and why?

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10. What does the CHART help a reader do that the article's words alone do NOT do as well?

- A. Tell a personal story about one tree
- B. Show what tree leaves look like
- C. Compare the exact heights of several trees side by side at a glance
- D. Explain why trees grow tall



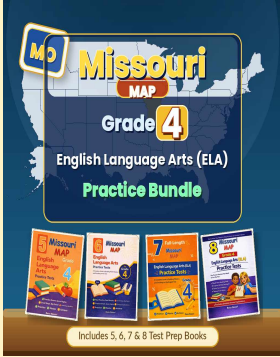
# Answer Keys

<p>1 <input type="radio"/> A <input type="radio"/> B <input checked="" type="radio"/> C <input type="radio"/> D</p> <p>2 <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input checked="" type="radio"/> D</p> <p>3 <input type="radio"/> A <input checked="" type="radio"/> B <input type="radio"/> C <input type="radio"/> D</p> <p>4 <input checked="" type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D</p> <p>5 <input checked="" type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D</p>	<p>6 <input type="radio"/> A <input checked="" type="radio"/> B <input type="radio"/> C <input type="radio"/> D</p> <p>7 <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input checked="" type="radio"/> D</p> <p>8 <input checked="" type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D</p> <p>9 <input type="text" value="See below"/></p> <p>10 <input type="radio"/> A <input type="radio"/> B <input checked="" type="radio"/> C <input type="radio"/> D</p>
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Explanations	
<b>1. C</b>	The chart lists Coast Redwood at 380 feet, the largest number. A is the second tallest (a misread of the chart). B is third. D is fourth — picking it confuses "tall" with a middle number.
<b>2. D</b>	White Oak at 145 feet is the smallest number on the chart. A is the tallest (the opposite). B is second tallest. C is fourth — close but Sugar Pine is 273 ft, not the lowest.
<b>3. B</b>	$380 - 145 = 235$ . A is what you get if you subtract $327 - 273$ (the wrong rows). C is $380 + 145$ (added instead of subtracted). D is the White Oak's own height (lifting a number from the chart and using it for the wrong question).
<b>4. A</b>	Douglas Fir $327 -$ Sitka Spruce $317 = 10$ feet. B, C, and D are real chart pairs but all have larger gaps. Picking D mistakes the LARGEST difference for the smallest.
<b>5. A</b>	Only A names the same tallest tree the chart shows at 380 feet. B is about AGE, not height. C is about lifespan. D is about WHERE the shortest tree grows, not the tallest.
<b>6. B</b>	The chart's title is about the tallest trees. A contradicts the article. C also contradicts the article. D is the OPPOSITE of the truth (they are short, not tall).
<b>7. D</b>	$380 \div 50 \approx 7.6$ . A and B undershoot the math. C confuses the WORD "50" with the answer — that 50 is the bristlecone's height, not the multiplier.
<b>8. A</b>	Timelines compare years/events. C compares heights, not ages. B compares parts of a whole. D is a labeled picture, which would not show time.
<b>9.</b>	<b>Answer:</b> Sample answers: (1) The foggy coast of northern California — the chart shows Coast Redwood is tallest (380 feet) AND the article says coast redwoods grow there where ocean moisture keeps them watered all year. (2) The Pacific Northwest also fits, because the article says Douglas firs and Sitka spruces (the next tallest on the chart) grow in the rainy Pacific Northwest. NOT acceptable: answers that only use the chart but ignore the article, or that pick the eastern U.S. (where the SHORTEST tree on the chart grows). Strong answers combine the chart's height numbers with the article's information about rainfall/moisture. Reject answers that use only one source or pick a drier area.
<b>10. C</b>	Charts shine at quick side-by-side comparisons of numbers. A is a job for a story or diary. B is a job for a picture. D is a job for explanation in words.



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