California Alternate Assessment Practice Items
Scoring Guide: Mathematics—Grade Eleven

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Introduction to Practice Test Scoring Guide

The California Alternate Assessment Mathematics Practice Test Scoring Guides provide details about the items, student response types, correct responses, and related scoring considerations for the California Alternate Assessment Practice Test items. The items selected for the Practice Test are designed to reflect

- a broad coverage of claims and targets that closely mirror the summative blueprint.
- a range of student response types.
- a breadth of difficulty levels across the items, ranging from easier to more difficult items.

It is important to note that all student response types are not fully represented on every practice test, but a distribution can be observed across all the practice tests. The items presented are reflective of refinements and adjustments to language based on pilot test results and expert recommendations from both content and accessibility perspectives.

Within this guide, each item is presented with the following information:

- Grade: Grade level for the item
- Category: a broad content area that contains related targets and standards (i.e., Writing)
- Core Content Connector (Connector): Alternative achievement standard linked to a Common Core State Standard (CCSS)
- Tier: Level that identifies the complexity of an item. Tiers levels are 1, 2, and 3.
- Static presentation of the item: static presentation of item from test administration system
- Static presentation of student response field(s): static presentation of response field from test administration system
- Answer key or exemplar: expected student response or example response from score point value
- Rubric and applicable score points for each item: score point representations for student responses

The following items are representative of the kinds of items that students can expect to experience when taking California Alternate Mathematics Assessment.
Grade Eleven Practice Test Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Grade</th>
<th>Category</th>
<th>Connector</th>
<th>Tier</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>11</td>
<td>Number and Quantity: The Real Number System</td>
<td>HS.NO.1a1 Simplify expressions that include exponents.</td>
<td>1</td>
</tr>
</tbody>
</table>

Which of these represents $3 \times 3$?

(A) 

(B) 

Key: B
Rubric: (1 point) The student selects the correct response.
<table>
<thead>
<tr>
<th>Item</th>
<th>Grade</th>
<th>Category</th>
<th>Connector</th>
<th>Tier</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>11</td>
<td>Statistics and Probability: Interpreting Categorical and Quantitative Data</td>
<td>H.DPS.1c1 Use descriptive stats; range, median, mode, mean, outliers/gaps to describe data set.</td>
<td>2</td>
</tr>
</tbody>
</table>

Look at this set of numbers.

\{2, 5, 5, 6, 8, 9, 14\}

What is the middle number of this set?

- **A** 5
- **B** 6
- **C** 7

Key: **B**

Rubric: (1 point) The student selects the correct response.
Look at Figure 1.

Figure 1

H = 6 in.
W = 5 in.
L = 7 in.

Volume = 210 cu in.

\[210 = ? \times 5 \times 6\]

The length is \(\boxed{?}\) inches.

Look at Figure 2.

Figure 2

H = ? in.
W = 6 in.
L = 10 in.

Volume = 360 cu in.

\[360 = 6 \times 10 \times ?\]

The height is \(\boxed{?}\) inches.

Key: 7, 6

Rubric:
(2 points) The student selects the two correct responses.
(1 point) The student selects one of the correct responses, but not both.
Item  Grade  Category  Connector  Tier
4  11  Functions: Interpreting Functions  H.PRF. 2c1 Make predictions based on a given model (for example, a weather model, data for athletes over years).  2

Look at this table.

Plant Growth

<table>
<thead>
<tr>
<th>Times Watered per Week</th>
<th>Height (inches)</th>
<th>Distance Around (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
<td>?</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>4</td>
<td>?</td>
<td>30</td>
</tr>
</tbody>
</table>

The height of the plant that was watered 4 times per week was ✔ inches.
The distance around the plant that was watered 2 times per week was ✔ inches.

Key: 15, 26

Rubric:
(2 points) The student selects the two correct responses.
(1 point) The student selects one of the correct responses, but not both.
<table>
<thead>
<tr>
<th>Item</th>
<th>Grade</th>
<th>Category</th>
<th>Connector</th>
<th>Tier</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>11</td>
<td>Statistics and Probability: Interpreting Categorical and Quantitative Data</td>
<td>H.DPS.1b1 Complete a graph given the data, using dot plots, histograms, or box plots.</td>
<td>2</td>
</tr>
</tbody>
</table>

**Look at this table.**

<table>
<thead>
<tr>
<th>Color</th>
<th>Number of Sheets</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>50</td>
</tr>
<tr>
<td>Green</td>
<td>45</td>
</tr>
<tr>
<td>Pink</td>
<td>30</td>
</tr>
</tbody>
</table>

**Key:** White, Pink

**Rubric:**
(2 point) The student selects the two correct responses.
(1 point) The student selects one of the correct responses, but not both.
<table>
<thead>
<tr>
<th>Item</th>
<th>Grade</th>
<th>Category</th>
<th>Connector</th>
<th>Tier</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>11</td>
<td>Number and Quantity: Quantities</td>
<td>H.ME.1a2 Solve real world problems involving units of measurement.</td>
<td>3</td>
</tr>
</tbody>
</table>

**Look at this rectangle.**

![Rectangle diagram](image)

**Part A**

The rectangle is 5 feet wide. How wide is the rectangle in inches?

- [ ] inches

**Part B**

The rectangle is 9 feet long. Which number sentence shows how to find the length of the rectangle in yards?

- A  $9 \times 3 = 27$
- B  $9 - 3 = 6$
- C  $9 \div 3 = 3$

**Key:** 60, C

**Rubric:**

(2 points) The student selects the two correct responses.

(1 point) The student selects one of the correct responses, but not both.
A student had $6. Then she found $4. She needs more money to buy a book for $12.

Which number sentences can be used to find how much more money she needs? Choose two.

- $10 - ? = 12$
- $10 + ? = 12$
- $6 + 4 + ? = 12$
- $6 - 4 + ? = 12$

Key: See exemplar.

Exemplar:
- $10 - ? = 12$
- $10 + ? = 12$
- $6 + 4 + ? = 12$
- $6 - 4 + ? = 12$

Rubric:
(2 points) The student selects the two correct responses.
(1 point) The student selects one of the correct responses, but not both.
<table>
<thead>
<tr>
<th>Item</th>
<th>Grade</th>
<th>Category</th>
<th>Connector</th>
<th>Tier</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>11</td>
<td>Geometry: Similarity, Right Triangles, and Trigonometry</td>
<td>H.GM.1b1 Use definitions to demonstrate congruency and similarity in figures.</td>
<td>1</td>
</tr>
</tbody>
</table>

**Which letter shows the side of the triangle?**

![Diagram of a triangle with labeled sides X and Y]

- **A** X
- **B** Y

**Key:** A  
**Rubric:** (1 point) The student selects the correct response.
### Item 9

<table>
<thead>
<tr>
<th>Item</th>
<th>Grade</th>
<th>Category</th>
<th>Connector</th>
<th>Tier</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>11</td>
<td>Number and Quantity: Quantities</td>
<td>H.ME.1a2 Solve real world problems involving units of measurement.</td>
<td>2</td>
</tr>
</tbody>
</table>

---

**Look at this table.**

<table>
<thead>
<tr>
<th>Feet</th>
<th>Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>3</td>
<td>36</td>
</tr>
</tbody>
</table>

This desk is 2 feet wide.

---

**Part A**

**How many inches wide is the desk?**

- A 12
- B 24
- C 36

**Part B**

**What is the total width of 4 desks?**

- A 8 inches
- B 48 inches
- C 96 inches

---

**Key:** B, C

**Rubric:**

(2 points) The student selects the two correct responses.

(1 point) The student selects one of the correct responses, but not both.
Look at this table.

Apple Sales

<table>
<thead>
<tr>
<th>Day</th>
<th>Number of Apples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>8</td>
</tr>
<tr>
<td>Tuesday</td>
<td>5</td>
</tr>
<tr>
<td>Wednesday</td>
<td>8</td>
</tr>
<tr>
<td>Thursday</td>
<td>5</td>
</tr>
<tr>
<td>Friday</td>
<td>4</td>
</tr>
</tbody>
</table>

The average number of apples sold each day was __________.

Key: 6
Rubric: (1 point) The student selects the correct response.
Look at this number sentence.

\[ 4^2 = 4 \times 4 \]

Which picture shows \(4^2\) circles?

Key: See exemplar.

Exemplar:

Rubric: (1 point) The student selects the correct response.
### Item 12

**Grade:** 11  
**Category:** Statistics and Probability: Interpreting Categorical and Quantitative Data  
**Connector:** H.DPS.1b1 Complete a graph given the data, using dot plots, histograms, or box plots.  
**Tier:** 3

#### Look at this table.

<table>
<thead>
<tr>
<th>Month</th>
<th>Total Sales ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>150</td>
</tr>
<tr>
<td>February</td>
<td>200</td>
</tr>
<tr>
<td>March</td>
<td>150</td>
</tr>
<tr>
<td>April</td>
<td>250</td>
</tr>
<tr>
<td>May</td>
<td>100</td>
</tr>
</tbody>
</table>

#### Finish this bar graph for March and May so that it matches the table.

**Month Sales**

- January
- February
- March
- April
- May

**Rubric:**

(2 points) The student selects the two correct responses.

(1 point) The student selects one of the correct responses, but not both.
Look at this number sentence.

$$2^3 = 2 \times 2 \times 2$$

What is the value of $5^3$?

$$5^3 = \square$$

8 15 125

Key: 125
Rubric: (1 point) The student selects the correct response.
<table>
<thead>
<tr>
<th>Item</th>
<th>Grade</th>
<th>Category</th>
<th>Connector</th>
<th>Tier</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>11</td>
<td>Algebra: Creating Equations</td>
<td>H.ME.1b2 Solve a linear equation to find a missing attribute given the area, surface area, or volume and the other attribute.</td>
<td>2</td>
</tr>
</tbody>
</table>

**Look at this cube.**

**Part A**

Here is the top of the cube.

- Volume = 64 cu in.
- 4 in.
- Area = 16 sq in.

The area of the top of the cube is 16 square inches.

\[ ? \times 4 = 16 \]

How long is the missing side of the top of the cube?

- A. 4 inches
- B. 8 inches
- C. 16 inches

**Part B**

The volume of the cube is 64 cubic inches.

Which number is missing in this math problem?

\[ 4 \times \_ = 64 \]

Key: A, 16

**Rubric:**

(2 points) The student selects the two correct responses.

(1 point) The student selects one of the correct responses, but not both.
Look at this graph.

This table is based on the graph.

<table>
<thead>
<tr>
<th>Time (hours)</th>
<th>Distance (miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>?</td>
</tr>
<tr>
<td>4</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>100</td>
</tr>
</tbody>
</table>

What number is missing from the table?

[ ] miles

**Key:** 60

**Rubric:** (1 point) The student enters the correct response.
### Item 16

**Grade:** 11  
**Category:** Statistics and Probability: Interpreting Categorical and Quantitative Data

**Connector:** H.DPS.1b1 Complete a graph given the data, using dot plots, histograms, or box plots.

---

**This table shows the type and number of pets at home.**

<table>
<thead>
<tr>
<th>Type of Pet</th>
<th>Number of Pets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dogs</td>
<td>3</td>
</tr>
<tr>
<td>Cats</td>
<td>2</td>
</tr>
<tr>
<td>Fish</td>
<td>4</td>
</tr>
</tbody>
</table>

**This bar graph matches the table. What is the label for each axis?**

- **Pets at Home**
  - Number of Pets
  - Type of Pet
  - Pets at Home

**Key:** See exemplar.

**Exemplar:**

- **Pets at Home**
  - Number of Pets
  - Type of Pet

**Rubric:**

(2 points) The student selects the two correct responses.

(1 point) The student selects one of the correct responses, but not both.
Grade Eleven Practice Test Items

### Item 17

**Grade:** 11  
**Category:** Algebra: Creating Equations  
**Connector:** H.PRF.2b1 Translate a real-world problem into a one-variable linear equation.  
**Tier:** 1

**A teacher had 3 calculators. He bought a box of new calculators and then had 15 calculators.**

Which number sentences can be used to find the number of calculators in the box? Choose two.

- $3 + 15 = ?$
- $3 + ? = 15$
- $? + 15 = 3$
- $? + 3 = 15$

**Key:** See exemplar.

**Exemplar:**

- $3 + 15 = ?$
- $3 + ? = 15$
- $? + 15 = 3$
- $? + 3 = 15$

**Rubric:**

(2 points) The student selects the two correct responses.

(1 point) The student selects one of the correct responses, but not both.
<table>
<thead>
<tr>
<th>Item</th>
<th>Grade</th>
<th>Category</th>
<th>Connector</th>
<th>Tier</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>11</td>
<td>Geometry: Similarity, Right Triangles, and Trigonometry</td>
<td>H.GM.1b1 Use definitions to demonstrate congruency and similarity in figures.</td>
<td>2</td>
</tr>
</tbody>
</table>

**Look at these triangles.**

**Which sentence is true?**

- **A** The triangles are the same shape and same size.
- **B** The triangles are the same shape but different sizes.
- **C** The triangles are neither the same shape nor the same size.

**Key:** B  
**Rubric:** (1 point) The student selects the correct response.
A student makes $15 each hour she works at her job. She worked for 3 hours.

Which graph shows how much money she made?

**Key:** See exemplar.

**Exemplar:**

**Rubric:** (1 point) The student selects the correct response.
<table>
<thead>
<tr>
<th>Item</th>
<th>Grade</th>
<th>Category</th>
<th>Connector</th>
<th>Tier</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>11</td>
<td>Algebra: Creating Equations</td>
<td>H.ME.1b2 Solve a linear equation to find a missing attribute given the area, surface area, or volume and the other attribute.</td>
<td>1</td>
</tr>
</tbody>
</table>

**Look at this picture.**

Length = 3 in.

Width = ? in.

Area = 6 sq in.

**Part A**

\[ \text{Area} = L \times W \]
\[ 6 = 3 \times ? \]

What is the width of the rectangle?

A. 2 inches
B. 6 inches

**Part B**

The area of a different rectangle is 16 square inches. The length is 4 inches.

\[ 16 = 4 \times ? \]

What is the width of this rectangle?

A. 4 inches
B. 16 inches

**Key:** A, A

**Rubric:**

(2 points) The student selects the two correct responses.
(1 point) The student selects one of the correct responses, but not both.
A student earned $9^2$ points on a test.

$$9^2 = 9 \times 9$$

How many points did the student earn?

$$\boxed{11 \quad 18 \quad 81}$$

Key: 81
Rubric: (1 point) The student selects the correct response.
### Item 22

<table>
<thead>
<tr>
<th>Item</th>
<th>Grade</th>
<th>Category</th>
<th>Connector</th>
<th>Tier</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>11</td>
<td>Statistics and Probability: Interpreting Categorical and Quantitative Data</td>
<td>H.DPS.1c1 Use descriptive stats; range, median, mode, mean, outliers/gaps to describe data set.</td>
<td>3</td>
</tr>
</tbody>
</table>

**Look at this set of numbers.**

{5, 10, 11, 13, 17}

**What is the difference between the greatest number and the least number in the set?**

**Key:** 12  
**Rubric:** (1 point) The student enters the correct response.
A student has 120 yellow cards and some blue cards. The student has a total of 183 cards.

\[120 + ? = 183\]

How many of the cards are blue?

A  63
B  120
C  303

Key: A
Rubric: (1 point) The student selects the correct response.
**Item** | **Grade** | **Category** | **Connector** | **Tier**
--- | --- | --- | --- | ---
24 | 11 | Functions: Interpreting Functions | H.PRF.1c1 Select the appropriate graphical representation of a linear model based on real world events. | 1

**Look at this table.**

<table>
<thead>
<tr>
<th>$x$</th>
<th>$y$</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>3</td>
</tr>
</tbody>
</table>

**The points from the table are shown on the graph. There is an extra point.**

**Choose the point that is not in the table.**

**Key:** See exemplar.

**Exemplar:**

**Rubric:** (1 point) The student selects the correct response.
<table>
<thead>
<tr>
<th>Item</th>
<th>Grade</th>
<th>Category</th>
<th>Connector</th>
<th>Tier</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>11</td>
<td>Algebra: Creating Equations</td>
<td>H.PRF.2b2 Solve equations with one or two variables using equations or graphs.</td>
<td>1</td>
</tr>
</tbody>
</table>

**Here are 5 mugs.**

**Which picture shows the 5 mugs in 2 groups?**

- A
- B

**Key:** A  
**Rubric:** (1 point) The student selects the correct response.