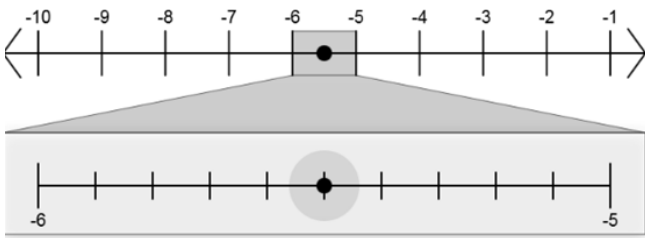

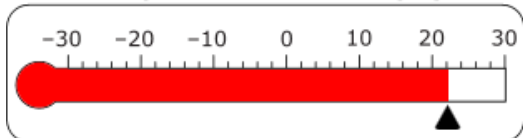


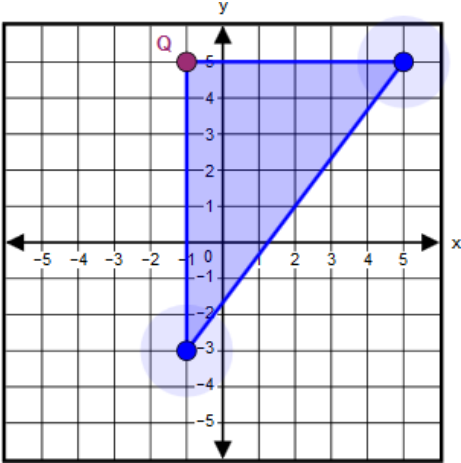
## Grade 7 Mathematics Computer-Based Practice Test Answer Key

The following pages include the answer key for all machine-scored items, followed by rubrics for the hand-scored items. The rubrics also show sample student responses; other valid methods for solving the problem can earn full credit unless a specific method is required by the item. In items where the scores are awarded for full and partial credit, students can still earn points for reasoning or modeling even if they make a computation error.

### Session 1

| Item Number | Item Type            | Answer Key  | Number of Points      | Standard             |             |                       |        |                |               |                 |         |    |               |    |           |    |   |    |   |          |
|-------------|----------------------|---|-----------------------|----------------------|-------------|-----------------------|--------|----------------|---------------|-----------------|---------|----|---------------|----|-----------|----|---|----|---|----------|
| 1           | SA                   |   | 1                     | 7.NS.A.1             |             |                       |        |                |               |                 |         |    |               |    |           |    |   |    |   |          |
| 2           | SA                   |    | 1                     | 7.EE.B.4             |             |                       |        |                |               |                 |         |    |               |    |           |    |   |    |   |          |
| 3           | SA                   | Part A: 25<br>Part B: 12  | 2                     | 7.G.A.1              |             |                       |        |                |               |                 |         |    |               |    |           |    |   |    |   |          |
| 4           | SR                   | $-3 - (-4x + 6) = (-6 + 4x) - 3$  | 1                     | 7.EE.A.2             |             |                       |        |                |               |                 |         |    |               |    |           |    |   |    |   |          |
| 5           | SA                   | <p style="text-align: center;"><b>Temperature at Sunset (°F)</b></p>    | 1                     | 7.NS.A.3             |             |                       |        |                |               |                 |         |    |               |    |           |    |   |    |   |          |
| 6           | SR                   | <p style="text-align: center;"><b>Reading Rates</b></p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>Day</th> <th>Number of Pages Read</th> <th>Time (hour)</th> <th>Rate (pages per hour)</th> </tr> </thead> <tbody> <tr> <td>Monday</td> <td><math>8\frac{1}{4}</math></td> <td><math>\frac{1}{6}</math></td> <td><math>49\frac{1}{2}</math></td> </tr> <tr> <td>Tuesday</td> <td>30</td> <td><math>\frac{1}{2}</math></td> <td>60</td> </tr> <tr> <td>Wednesday</td> <td>80</td> <td>2</td> <td>40</td> </tr> </tbody> </table> | Day                   | Number of Pages Read | Time (hour) | Rate (pages per hour) | Monday | $8\frac{1}{4}$ | $\frac{1}{6}$ | $49\frac{1}{2}$ | Tuesday | 30 | $\frac{1}{2}$ | 60 | Wednesday | 80 | 2 | 40 | 1 | 7.RP.A.1 |
| Day         | Number of Pages Read | Time (hour)   | Rate (pages per hour) |                      |             |                       |        |                |               |                 |         |    |               |    |           |    |   |    |   |          |
| Monday      | $8\frac{1}{4}$       | $\frac{1}{6}$   | $49\frac{1}{2}$       |                      |             |                       |        |                |               |                 |         |    |               |    |           |    |   |    |   |          |
| Tuesday     | 30                   | $\frac{1}{2}$   | 60                    |                      |             |                       |        |                |               |                 |         |    |               |    |           |    |   |    |   |          |
| Wednesday   | 80                   | 2   | 40                    |                      |             |                       |        |                |               |                 |         |    |               |    |           |    |   |    |   |          |

Session 2

| Item Number | Item Type                        | Answer Key  | Number of Points | Standard |    |             |                                  |                       |            |                       |                                  |         |                       |                                  |         |                                  |                       |   |          |
|-------------|----------------------------------|---|------------------|----------|----|-------------|----------------------------------|-----------------------|------------|-----------------------|----------------------------------|---------|-----------------------|----------------------------------|---------|----------------------------------|-----------------------|---|----------|
| 1           | SR                               | C, E, F   | 1                | 7.G.A.3  |    |             |                                  |                       |            |                       |                                  |         |                       |                                  |         |                                  |                       |   |          |
| 2           | SA                               | $\frac{1}{9}$ or equivalent   | 1                | 7.SP.C.7 |    |             |                                  |                       |            |                       |                                  |         |                       |                                  |         |                                  |                       |   |          |
| 3           | SA                               |   | 1                | 7.G.A.2  |    |             |                                  |                       |            |                       |                                  |         |                       |                                  |         |                                  |                       |   |          |
| 4           | SR                               | <table border="1" data-bbox="427 1041 1141 1308"> <thead> <tr> <th>Expression</th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td><math>p - 0.15p</math></td> <td><input checked="" type="radio"/></td> <td><input type="radio"/></td> </tr> <tr> <td><math>p - 0.15</math></td> <td><input type="radio"/></td> <td><input checked="" type="radio"/></td> </tr> <tr> <td><math>0.15p</math></td> <td><input type="radio"/></td> <td><input checked="" type="radio"/></td> </tr> <tr> <td><math>0.85p</math></td> <td><input checked="" type="radio"/></td> <td><input type="radio"/></td> </tr> </tbody> </table> | Expression       | Yes      | No | $p - 0.15p$ | <input checked="" type="radio"/> | <input type="radio"/> | $p - 0.15$ | <input type="radio"/> | <input checked="" type="radio"/> | $0.15p$ | <input type="radio"/> | <input checked="" type="radio"/> | $0.85p$ | <input checked="" type="radio"/> | <input type="radio"/> | 1 | 7.EE.A.2 |
| Expression  | Yes                              | No  |                  |          |    |             |                                  |                       |            |                       |                                  |         |                       |                                  |         |                                  |                       |   |          |
| $p - 0.15p$ | <input checked="" type="radio"/> | <input type="radio"/>   |                  |          |    |             |                                  |                       |            |                       |                                  |         |                       |                                  |         |                                  |                       |   |          |
| $p - 0.15$  | <input type="radio"/>            | <input checked="" type="radio"/>  |                  |          |    |             |                                  |                       |            |                       |                                  |         |                       |                                  |         |                                  |                       |   |          |
| $0.15p$     | <input type="radio"/>            | <input checked="" type="radio"/>  |                  |          |    |             |                                  |                       |            |                       |                                  |         |                       |                                  |         |                                  |                       |   |          |
| $0.85p$     | <input checked="" type="radio"/> | <input type="radio"/>   |                  |          |    |             |                                  |                       |            |                       |                                  |         |                       |                                  |         |                                  |                       |   |          |
| 5           | SR                               | A   | 1                | 7.RP.A.1 |    |             |                                  |                       |            |                       |                                  |         |                       |                                  |         |                                  |                       |   |          |
| 6           | CR                               | See Rubric  | 4                | 7.RP.A.3 |    |             |                                  |                       |            |                       |                                  |         |                       |                                  |         |                                  |                       |   |          |

Rubric is on the next page.

| Scoring Guide |   |
|---------------|---|
| Score         | Description   |
| 4             | The student response demonstrates an exemplary understanding of the Ratios and Proportional Relationships concepts involved in using proportional relationships to solve multi-step ratio and percent problems. The student uses proportional relationships in three different situations to solve for either distance, time, or rate.  |
| 3             | The student response demonstrates a good understanding of the Ratios and Proportional Relationships concepts involved in using proportional relationships to solve multi-step ratio and percent problems. Although there is significant evidence that the student was able to recognize and apply the concepts involved, some aspect of the response is flawed. As a result the response merits 3 points. |
| 2             | The student response demonstrates a fair understanding of the Ratios and Proportional Relationships concepts involved in using proportional relationships to solve multi-step ratio and percent problems. While some aspects of the task are completed correctly, others are not. The mixed evidence provided by the student merits 2 points.   |
| 1             | The student response demonstrates a minimal understanding of the Ratios and Proportional Relationships concepts involved in using proportional relationships to solve multi-step ratio and percent problems.  |
| 0             | The student response contains insufficient evidence of an understanding of the Ratios and Proportional Relationships concepts involved in using proportional relationships to solve multi-step ratio and percent problems to merit any points.  |

**Sample Response:**

- a.  $d = 5$  miles;  $d = rt$ ,  $d = 10 \left(\frac{1}{2}\right) = 5$
- b. It will take Derrick 20 minutes to get to the park.  
 $d = rt$ ;  $3 = 9t$ ,  $t = \frac{1}{3}$  hour or 20 minutes

OR

- $\frac{9}{60} = \frac{3}{xx}$ ,  $9x = 180$ ,  $x = 20$  minutes
- c.  $r = 12.5$  miles per hour;  $d = rt$ ;  $2.5 = r \left(\frac{1}{5}\right)$

