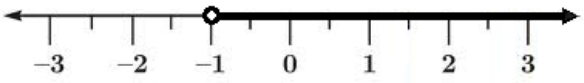
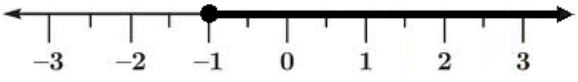
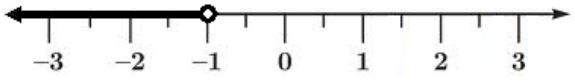
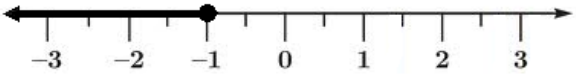
Task Model 1 **Response Type: Multiple Choice, multiple correct response** **DOK Level 1** **7.EE.B.3** Solve multi-step, real-life, and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. **Evidence Required:** 1. The student identifies equivalency between two rational numbers. **Tools:** None **Version 3 Update:** Retired TM1b.	**Prompt Features:** The student is prompted to determine whether two numeric expressions are equivalent. **Stimulus Guidelines:** • Item difficulty can be adjusted via these example methods: ○ Numbers within the expressions can be integers, decimals, fractions, or mixed numbers. ○ The expressions may include any or all of the four arithmetic operations with or without parentheses. ○ Higher difficulty level problems need to include mixed numbers and the use of parentheses. **TM1a** **Stimulus:** The student is presented with a multi-step numeric expression involving rational numbers in at least two of these three forms: fraction, decimal, whole number. **Example Stem:** Select **all** expressions equivalent to $2.3 \bullet (1\frac{1}{8} + 0.125) - 9$. A. $2.3 \bullet (1.25) - 9$ B. $9 - 2.3 \bullet (1.125 + \frac{1}{8})$ C. $-9 + 2.3 \bullet (1.125 + \frac{1}{8})$ D. $2.3 \bullet (9 - 1.25)$ **Answer Choices:** Each answer choice is an expression following the same stimulus guidelines. Distractors include expressions with misapplication of properties of operations, sign mistakes, or computation errors. **Rubric:** (1 point) The student selects all the appropriate expressions (e.g., A and C). **Response Type:** Multiple Choice, multiple correct response

Task Model 2 **Response Type: Equation/Numeric** **DOK Level 1** **7.EE.B.3** Solve multi-step, real-life, and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. **Evidence Required:** 2. The student applies properties of operations to evaluate numeric expressions, including converting between different forms of rational numbers. **Tools:** Calculator **Version 3 Update:** Added new example stem to TM2a and revised TM2b. Now both TMs allow for calculator use.	**Prompt Features:** The student is prompted to determine the value of a numeric expression. **Stimulus Guidelines:** • Item difficulty can be adjusted via these example methods: ○ Numbers within the expressions can be integers, decimals, fractions, or mixed numbers. ○ The expressions may include any or all of the four arithmetic operations with or without parentheses. ○ Where possible use numbers that support the use of mental computation, and where using a calculator could be more challenging. **TM2a** **Stimulus:** The student is presented a multi-step numeric expression involving rational numbers in at least two of these three forms: fraction, decimal, or whole number. **Example Stem 1:** Enter the value of $2\frac{1}{4} \bullet (4 + 12)$. **Example Stem 2:** What is the mean of -15, -12, 8, and 9? **Rubric:** (1 point) The student accurately calculates the value (e.g., 36; -2.5). **Response Type:** Equation/Numeric **TM2b** **Stimulus:** The student is presented with a contextual problem that requires converting between different forms of rational numbers. **Example Stem:** Javier's fuel tank holds $12\frac{3}{4}$ gallons of gasoline when completely full. He had some gas in the tank and added 10.3 gallons of gasoline to fill it completely. How many gallons of gasoline were in the tank before Javier added some? **Rubric:** (1 point) Student enters a correct value (2.45 or equivalent). **Response Type:** Equation/Numeric

Task Model 3
 	
Response Type: Equation/Numeric
 	
DOK Level 2
 	
7.EE.B.4a
Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?*
 	
Evidence Required:
3. The student solves word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are specific rational numbers.
 	
Tools: Calculator
	Prompt Features: The student is prompted to identify an equation or solution that represents a real-world problem.
	
	Stimulus Guidelines:
	• Contexts must be familiar to students 12–14 years old.
	• Item difficulty can be adjusted via these example methods:
	  ○ Expressions have only positive rational coefficients or terms.
	  ○ Expressions include negative rational coefficients or terms.
	
	TM3
	Stimulus: The student is presented with a real-world situation that leads to an equation of the form $px + q = r$ or $p(x + q) = r$, where p, q, and r are rational numbers.
	
	Example Stem 1: A coach buys a uniform and a basketball for each of the 15 players on the team. Each basketball costs $9.40. The coach spends a total of $420 for uniforms and basketballs.
	
	Enter an equation that models the situation with u, the cost of one uniform.
	
	Example Stem 2: A coach buys a uniform and a basketball for each of the 15 players on the team. Each basketball costs $9. The coach spends a total of $420 for uniforms and basketballs.
	
	Enter the cost, in dollars, of 1 uniform.
	
	Rubric: (1 point) Student enters a correct equation or value (e.g., $15u + 15 \bullet 9.4 = 420$; 19).
	
	Response Type: Equation/Numeric

Task Model 4
 	
Response Type: Equation/Numeric
 	
DOK Level 2
 	
7.EE.B.4b
Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.
 	
Evidence Required:
4. The student solves word problems leading to inequalities of the form $px + q > r$ and $px + q < r$, where p, q, and r are specific rational numbers.
 	
Tools: Calculator
 	
Version 3 Update:
Updated stimulus guidelines to allow for non-strict inequalities and retired example stem 2 for TM4.
	Prompt Features: The student is prompted to give an inequality that represents a real-world problem.
	
	Stimulus Guidelines:
	• Contexts must be familiar to students 12–14 years old.
	• CCSS Progressions clarifies that non-strict inequalities (≤ and ≥) may be used for 7.EE.B.
	• Item difficulty can be adjusted via these methods:
	  ○ Inequalities have only positive rational coefficients or terms.
	  ○ Inequalities include negative rational coefficients or terms.
	  ○ Boundary value of solution set is an integer.
	
	TM4
	Stimulus: The student is presented with a real-world situation that leads to an inequality in the form of $px + q > r$ or $px + q < r$, where p, q, and r are rational numbers.
	
	Example Stem: Linda has $26. She wants to buy a ski pass for $80. She can earn $6 per hour to babysit.
	
	Enter an inequality that represents the number of hours (*h)* Linda could babysit to earn at least enough money to buy the ski pass.
	
	Rubric: (1 point) The student enters a correct inequality (e.g., $6h + 26 \geq 80$).
	
	Response Type: Equation/Numeric

Task Model 5 **Response Type: Multiple Choice, single correct response** **DOK Level 2** **7.EE.B.4b** Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. b. Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r, are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. **Evidence Required:** 5. The student graphs the solution set of an inequality on a number line. **Tools:** Calculator **Version 3 Update:** Updated stimulus guidelines to allow for non-strict inequalities.	**Prompt Features:** The student is prompted to identify the graph of the solution set of an inequality. **Stimulus Guidelines:** • Item difficulty can be adjusted via these example methods: ○ CCSS Progressions clarifies that non-strict inequalities (≤ and ≥) may be used for 7.EE.B. ○ Constants are integers; coefficient is one. ○ Constants are integers; boundary value of solution set is an integer. ○ Boundary value of solution set is a fraction/mixed number, or decimal. **TM5a** **Stimulus:** The student is presented with an inequality of the form $px + q > r$ or $px + q < r$, where p, q, and r are rational numbers. **Example Stem:** Which number line shows the solution to the inequality $-3x - 5 < -2$? A.  B.  C.  D.  **Answer Choices:** The answer choices will be horizontal lines, each showing a graph of an inequality. Distractors will include common mistakes made when graphing inequalities such as a ray pointing the wrong direction, rays with closed and/or open circles, incorrect solution to the inequality by not performing the correct operation to both sides of the inequality, and forgetting to switch the inequality symbol when dividing/multiplying by a negative number. **Rubric:** (1 point) The student selects the correct number line (e.g., A). **Response Type:** Multiple Choice, single correct response

Task Model 5

Response Type: Drag and Drop

DOK Level 2

7.EE.B.4b
Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. *For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Give an inequality for the number of sales you need to make, and describe the solutions.*

Evidence Required:
5. The student graphs the solution set of an inequality on a number line.

Tools: Calculator

Version 3 Update:
Updated stimulus guidelines to allow for non-strict inequalities.

Accessibility Note:
Drag and Drop items are not currently able to be Brailled. Minimize the number of items developed to this TM.

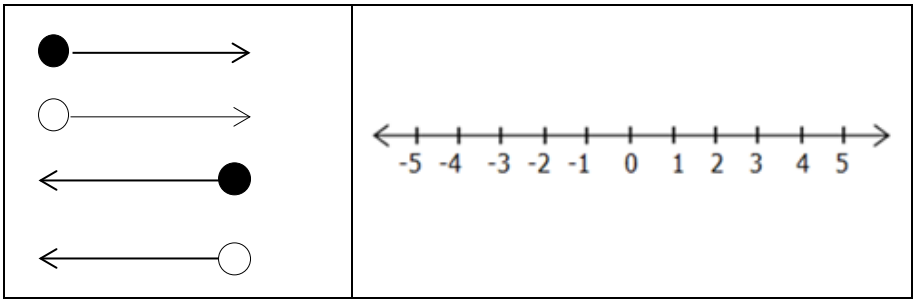
Prompt Features: The student is prompted to identify the solution set of an inequality on a number line.

Stimulus Guidelines:

- Contexts must be familiar to students 12–14 years old. CCSS Progressions clarifies that non-strict inequalities (≤ and ≥) may be used for 7.EE.B.
- Drag elements should not replace preset palette.
- Drag elements should include: closed and open circles with arrows going to the left and right directions.
- Appropriate tick marks should be spaced and labeled throughout the number line. Each tick mark should have snap regions that can fit the circles and arrows.
- Item difficulty can be adjusted via these methods:
  - Inequalities can have positive or negative rational coefficients or terms.
  - Include only strict or non-strict representations depending on the given inequality.
  - Constants are integers; boundary value of solution set can be an integer divided by a positive coefficient.
  - Boundary value of solution set can be an integer, fraction, mixed number or decimal.

TM5b
Stimulus: The student is presented with an inequality of the form $px + q > r$ or $px + q < r$, where p, q, and r are rational numbers, or a situation that can be modeled with an inequality.

Example Stem: Drag the correct arrow to the number line to represent the solution of the inequality $3x + 7 > 13$.



Interaction: The student will drag an arrow from a set of preset images to a number line to represent the solution of an inequality. Snap-to feature should be used at each tick mark.

Rubric: (1 point) The student graphs the inequality by placing an arrow on the number line.

Response Type: Drag and Drop