Task Model 1
 	
Response Type: Multiple Choice, single correct response
 	
DOK Level 1
 	
7.EE.A.1
Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
 	
Evidence Required:
1. The student adds and subtracts linear expressions with rational coefficients.
 	
Tools: None
	Prompt Features: The student is prompted to identify the sum or difference of linear expressions with rational coefficients.
	
	Stimulus: The student is presented with two or more linear expressions.
	• Item difficulty can be adjusted via these methods:
	  ○ Expressions have integer coefficients.
	  ○ Expressions include decimal coefficients.
	  ○ Expressions include coefficients which are fractions or mixed numbers.
	  ○ Expressions include exactly one variable.
	  ○ Expressions include more than one variable.
	
	TM1a
	Example Stem 1: Select the expression equivalent to $(3x + 2) + (-6x + 3)$.
	
	A. $-3x + 5$
	B. $3x + 5$
	C. $9x + 5$
	D. $-9x + 5$
	
	Example Stem 2: Select the expression equivalent to $(2.1x + 4.3) - (-3x - 7)$.
	
	A. $-0.9x - 2.7$
	B. $-0.9x + 11.3$
	C. $5.1x - 2.7$
	D. $5.1x + 11.3$
	
	Answer Choices: Each answer choice should be expressions in the form $px + q$, where p and q are integers or rational numbers, depending on the level of difficulty. Distractors will include incorrect calculations based on negative sign(s) and incorrectly combining terms.
	
	Rubric: (1 point) The student identifies the equivalent expression (e.g., A; D).
	
	Response Type: Multiple Choice, single correct response

Task Model 1
 	
Response Type: Equation/Numeric
 	
DOK Level 1
 	
7.EE.A.1
Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
 	
Evidence Required:
1. The student adds and subtracts linear expressions with rational coefficients.
 	
Tools: None
	Prompt Features: The student is prompted to identify the sum or difference of linear expressions with rational coefficients.
	
	Stimulus: The student is presented with a linear equation including a sum or difference where combining like terms of one side of the equation gives rise to the solution for *n* without further manipulation.
	• Item difficulty can be adjusted via these methods:
	  ○ Expressions have integer coefficients.
	  ○ Expressions include decimal coefficients.
	  ○ Expressions include coefficients which are fractions or mixed numbers.
	  ○ Expressions include exactly one variable.
	  ○ Expressions include more than one variable.
	
	TM1b
	Example Stem 1: Enter the value of *n* so that the expression $(-y + 5) + (7y - 9)$ is equivalent to $(ny - 4)$.
	
	Example Stem 2: Enter the value of *n* so that the expression $(-y + 5.3) + (7.2y - 9)$ is equivalent to $6.2y + n$.
	
	Rubric: (1 point) The student enters the correct value for the variable (e.g., 6; –3.7).
	
	Response Type: Equation/Numeric

Task Model 2
 	
Response Type: Multiple Choice, multiple correct response
 	
DOK Level 1
 	
7.EE.A.1
Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
 	
Evidence Required:
2. The student factors linear expressions with rational coefficients.
 	
Tools: None
	Prompt Features: The student is prompted to identify the factors of a linear expression.
	
	Stimulus: The student is presented with a linear expression with rational coefficients.
	• Item difficulty can be adjusted via these methods:
	  ○ Expressions have only positive rational coefficients.
	  ○ Expressions include negative rational coefficients.
	
	TM2a
	Example Stem: Select **all** expressions equivalent to $-72x + 60$.
	
	A. $-12(6x - 5)$
	B. $-12(-6x - 5)$
	C. $6(-12x + 10)$
	D. $-6(-12x - 10)$
	
	Answer Choices: Answer choices will be expressions in the form $p(qx + r)$ or $p(r + qx)$, where p, q, and r are rational numbers. Distractors will include misuse of the distributive property, incorrect calculations based on negative sign(s), and incorrectly combining terms.
	
	Rubric: (1 point) The student selects all of the equivalent 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.A.1** Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients. **Evidence Required:** 2. The student factors linear expressions with rational coefficients. **Tools:** None	**Prompt Features:** The student is prompted to enter the factor of a linear expression given an equation containing two variables. **Stimulus:** The student is presented with two linear expressions. • Item difficulty can be adjusted via these methods: ○ Expressions have only positive rational coefficients. ○ Expressions include negative rational coefficients. ○ Should contain one or more rational coefficient(s). ○ Coefficients are rational numbers sharing a common factor with other terms. **TM2b** **Example Stem 1:** Enter the value of p so that the expression $3(n + 5)$ is equivalent to $(n + p)3$. **Example Stem 2:** Enter the value of p so that the expression $\frac{5}{6} - \frac{1}{3}n$ is equivalent to $p(5 - 2n)$. **Rubric:** (1 point) The student enters the correct value for p (e.g., 5; $\frac{1}{6}$). **Response Type:** Equation/Numeric

Task Model 3
 	
Response Type: Multiple Choice, single correct response
 	
DOK Level 1
 	
7.EE.A.1
Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
 	
Evidence Required:
3. The student expands linear expressions with rational coefficients.
 	
Tools: None
	Prompt Features: The student is prompted to identify equivalent expressions with rational coefficients that involve expanded form.
	
	Stimulus: The student is presented with a linear expression.
	• Item difficulty can be adjusted via these methods:
	  ○ Expressions have positive or negative integer coefficients.
	  ○ Expressions include rational coefficients.
	
	TM3a
	Example Stem 1: Which expression is equivalent to $-15x + 6$?
	
	A. $-3(5x - 2)$
	B. $-3(5x + 6)$
	C. $3(-5x - 2)$
	D. $3(5x + 6)$
	
	Example Stem 2: Which expression is equivalent to $-0.8(10.8x - 20 + 3.2x)$?
	
	A. $-11.2x + 16$
	B. $-11.2x - 16$
	C. $-8.64x - 16.8$
	D. $-8.64x + 16.8$
	
	Answer Choices: Distractors will include misuse of the distributive property; incorrect calculations are based on negative sign(s), and incorrectly combining terms.
	
	Rubric: (1 point) The student selects the equivalent expression (e.g., A; A).
	
	Response Type: Multiple Choice, single correct response

Task Model 3
 	
Response Type: Equation/Numeric
 	
DOK Level 1
 	
7.EE.A.1
Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
 	
Evidence Required:
3. The student expands linear expressions with rational coefficients.
 	
Tools: None
	Prompt Features: The student is prompted to enter the unknown value of an equivalent expression to the expanded form of a linear expression with rational coefficients.
	
	Stimulus: The student is presented with two equivalent linear expressions.
	• Item difficulty can be adjusted via these methods:
	  ○ Expressions have positive or negative integer coefficients.
	  ○ Expressions include rational coefficients.
	  ○ One expression has two variables.
	
	TM3b
	Example Stem: Enter the value of b when the expression $14.1x + b$ is equivalent to $4.7(3x - 3.5)$.
	
	Rubric: (1 point) The student enters the value for b (e.g.,–16.45).
	
	Response Type: Equation/Numeric

Task Model 4
 	
Response Type: Multiple Choice, multiple correct response
 	
DOK Level 2
 	
7.EE.A.1
Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
 	
Evidence Required:
4. The student generates equivalent linear expressions using a combination of addition and subtraction, factoring, and expansion.
 	
Tools: None
	Prompt Features: The student is prompted to identify a linear expression that is equivalent to a given linear expression.
	
	Stimulus: The student is presented with a linear expression.
	• Item difficulty can be adjusted via these methods:
	  ○ Expressions have only positive rational coefficients.
	  ○ Expressions include negative rational coefficients.
	  ○ Only addition/subtraction of expressions is required.
	  ○ Factoring/expansion of expressions is required.
	
	TM4
	Example Stem 1: Select **all** expressions that are equivalent to $3x + 5(-4x + 12) - (x - 3)$.
	
	A. $-18x + 63$
	B. $18x - 63$
	C. $3x - 20x + 60 - x + 3$
	D. $3x + 20x + 60 - x - 3$
	
	Example Stem 2: Select **all** expressions that are equivalent to $0.75x + 0.25(x + 12.4) + (x - 2.1)$.
	
	A. $2x + 1$
	B. $x + 1$
	C. $x + 3.1 + x + 2.1$
	D. $x + 3.1 + x - 2.1$
	
	Answer Choices: Distractors will include misuse of the distributive property, incorrect calculations based on negative sign(s), and incorrectly combining terms.
	
	Rubric: (1 point) The student selects all the appropriate expressions (e.g., A and C; A and D).
	
	Response Type: Multiple Choice, multiple correct response