DELTA MATH — RtI PROGRAM

Name_____ Date_____

Learning Target: I will solve multi-step equations for *x*.

1.

Solve the equation for *x*.

$$3x + 1 = 16$$

○ 4   ○ 5   ○ 6   ○ 45

2.

Solve the equation for *x*.

$$2(x + 4) = 14$$

○ 3   ○ 6   ○ 11   ○ 22

3.

Solve the equation for *x*.

$$3(x - 2) = 18$$

○ 24   ○ 8   ○ 6   ○ 4

Name_____ Date_____

Learning Target: I will solve multi-step linear equations.

Directions: Solve each equation for *x*. (Work time: 4 minutes)

1. $$16 \ = \ 2x \ + \ 4$$	**2.** $$3 \ - \ 4x \ = \ 11$$
3. $$-5 \ + \ 3x \ = \ 10$$	**4.** $$2(x \ + \ 5) \ = \ 30$$
5. $$\frac{1}{4}(x \ - \ 3) \ = \ 20$$	**6.** $$\frac{2}{3}x \ + \ 6 \ = \ -14$$

Growth Chart

8th Grade – Readiness Standard 6 – 7.EE.4a

Name_____ Date_____

Learning Target: I will solve multi-step linear equations.

Goal: 5 out of 6 correct
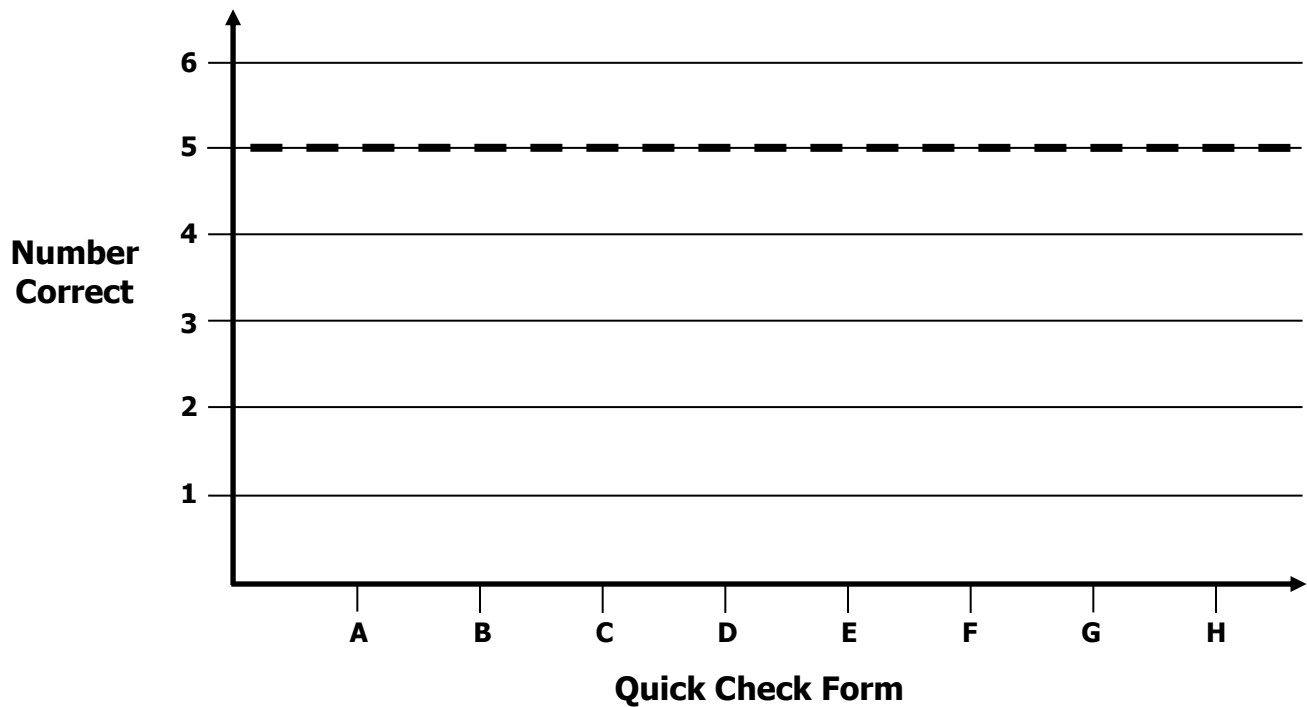
Intervention	Date	Score
Guided Review		

Learning Target: I will solve equations with more than one step

Session 2: Guided Practice (We Do)

Materials:

➤ Algebra Tiles (20 +1's, 10 +x's, 20 -1's, 10 -x's per pair of students taking turns using the tiles.)

➤ Equation mat (1 per student)

We Do Together: (Teacher Actions)

➤ Translate the equation into a phrase with meaning. Then, use algebra tiles to find the solution.

1. $3x + 4 = 10$	**2.** $3x - 4 = 8$
3. $-13 = 4x + 3$	**4.** $4x - 1 = -13$

Learning Target: I will solve equations with more than one step
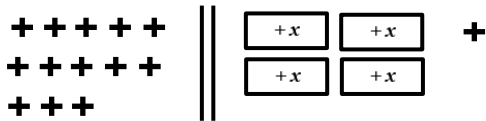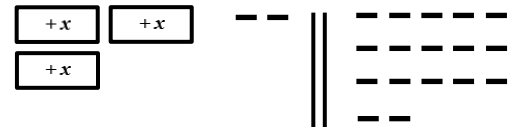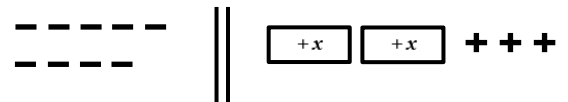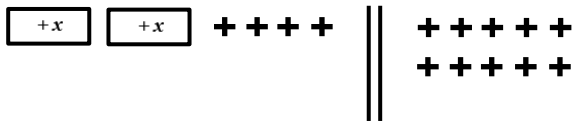
8th Grade - RS 6 - 7.EE.4a

Session 2: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

➢ Students take turns leading to solve each equation using algebra tiles.
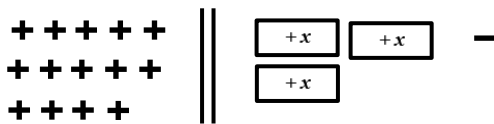
5.	6.
$2x + 4 = 10$	$2x + 4 = -10$
7.	**8.**
$3x - 1 = -13$	$3x - 1 = 14$
9.	**10.**
$4x + 2 = -10$	$4x - 2 = -10$

Name_____ Date_____

Learning Target: I will solve multi-step linear equations.

Directions: Solve each equation for *x*. (Work time: 4 minutes)

1. $31 = 5x + 6$	**2.** $2 - 3x = 11$
3. $-10 + 5x = 40$	**4.** $2(x + 9) = 24$
5. $\frac{1}{5}(x - 2) = 8$	**6.** $\frac{3}{4}x + 10 = -14$

Learning Target: I will solve equations with more than one step   8th Grade - RS 6 - 7.EE.4a

Session 3: Guided Practice (We Do)

We Do Together: (Teacher Actions)

- ➢ Translate the equation into a phrase with meaning. Then, complete the math drawing to find the solution.

1. $13 = 4x + 1$ + + + + + ‖ [+x] [+x] + + + + + + ‖ [+x] [+x] + + +	**2.** $3x - 2 = -17$ [+x] [+x] – – ‖ – – – – – [+x] ‖ – – – – – ‖ – – – – – ‖ – –
3. $2(x + 4) = 14$ [+x] + + + + ‖ + + + + + [+x] + + + + ‖ + + + + + ‖ + + + +	**4.** $-9 = 2x + 3$ – – – – – ‖ [+x] [+x] + + + – – – –

Learning Target: I will solve equations with more than one step   8th Grade - RS 6 - 7.EE.4a

Session 3: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

  ➢   Students take turns leading to solve each equation.
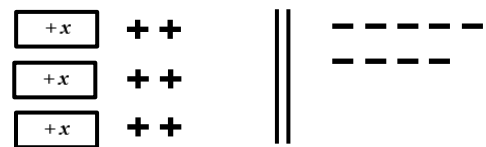
5. $2x + 4 = 10$	6. $3(x + 2) = -9$
7. $14 = 3x - 1$	8. $-13 = 3x - 1$
9. $4x + 2 = -10$	10. $4x - 2 = -10$
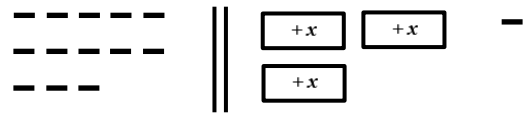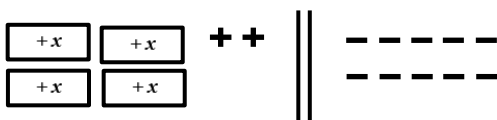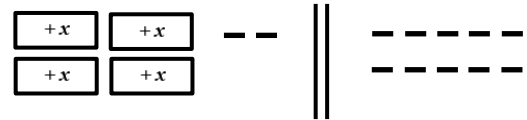
Name_____ Date_____

Learning Target: I will solve multi-step linear equations.

Directions: Solve each equation for *x*. (Work time: 4 minutes)

1. $$14 = 4x + 2$$	**2.** $$5 - 2x = 19$$
3. $$-7 + 4x = 21$$	**4.** $$3(x + 4) = 24$$
5. $$\frac{1}{3}(x - 6) = 7$$	**6.** $$\frac{4}{5}x + 3 = -17$$

Learning Target: I will solve equations with more than one step   8th Grade - RS 6 - 7.EE.4a

Session 4: Guided Practice (We Do)

We Do Together: (Teacher Actions)

➢ Translate the equation into a phrase with meaning. Then, complete the math drawing to find the solution.

1. *"1 third of what number plus 3 is equal to 10?"* $$\frac{1}{3}x + 3 = 10$$ +x-tile	**2.** $$\frac{1}{4}x - 3 = -1$$ +x-tile
3. $$1 = \frac{2}{5}x - 5$$ +x-tile	**4.** $$\frac{3}{4}x + 2 = 17$$ +x-tile

Learning Target: I will solve equations with more than one step   8th Grade - RS 6 - 7.EE.4a

Session 4: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

➤ Students take turns leading to solve each 1-step equation.

5. *"1 fourth of what number plus 2 is equal to 9?"*

$$\frac{1}{4}x + 2 = 9$$

+x-tile

6.

$$\frac{2}{3}x - 5 = 1$$

+x-tile

7.

$$7 = 3x + 1$$

8.

$$\frac{1}{3}x - 4 = 2$$

+x-tile

9.

$$10 = \frac{3}{5}x - 2$$

+x-tile

10.

$$4x + 5 = 17$$

Quick Check - Form D

8th Grade – Readiness Standard 6 – 7.EE.4a

Name_____ Date_____

Learning Target: I will solve multi-step linear equations.

Directions: Solve each equation for *x*. (Work time: 4 minutes)

1. $$20 = 6x + 8$$	**2.** $$7 - 5x = 32$$
3. $$-9 + 8x = 15$$	**4.** $$4(x + 2) = 28$$
5. $$\frac{1}{2}(x - 4) = 10$$	**6.** $$\frac{3}{5}x + 5 = -25$$

Session 5: Guided Practice (We Do)

We Do Together: (Teacher Actions)

➤ Translate the equation into a phrase to understand the equality. Then, show each step using numbers and symbols to find the solution.

1. $19 = 4x - 1$	2. $2(x + 4) = 14$	3. $\frac{2}{3}x + 4 = 10$

Learning Target: I will solve equations with more than one step   8th Grade - RS 6 - 7.EE.4a

Session 5: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

➢ Students take turns leading to show each step using numbers and symbols to find the solution.

4. $2x + 4 = 10$	5. $3(x + 2) = -9$	6. $-13 = 3x - 1$
7. $\frac{1}{4}x + 2 = 9$	8. $\frac{2}{3}x - 5 = 1$	9. $1 = \frac{2}{5}x - 5$

Name_____ Date_____

Learning Target: I will solve multi-step linear equations.

Directions: Solve each equation for *x*. (Work time: 4 minutes)

1. $$16 = 2x + 4$$	**2.** $$3 - 4x = 11$$
3. $$-5 + 3x = 10$$	**4.** $$2(x + 5) = 30$$
5. $$\frac{1}{4}(x - 3) = 20$$	**6.** $$\frac{2}{3}x + 6 = -14$$

Learning Target: I will solve equations with more than one step

8th Grade - RS 6 - 7.EE.4a

Session 6: Guided Practice (We Do)

We Do Together: (Teacher Actions)

➢ Translate the equation into a phrase with meaning. Then, complete the math drawing to find the solution.

1. $14 = 4x + 2$ 	**2.** $3x - 4 = -19$
3. $2(x + 5) = 16$ 	**4.** $-8 = 2x + 4$

Learning Target: I will solve equations with more than one step
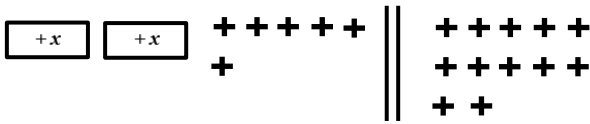
8th Grade - RS 6 - 7.EE.4a

Session 6: **Guided Practice** (We Do - Continued)

You Do Together: (As a class, or in small groups)

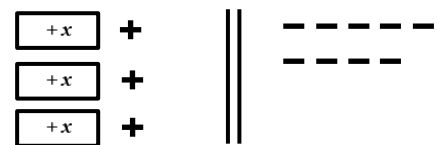➤ Students take turns leading to solve each equation.

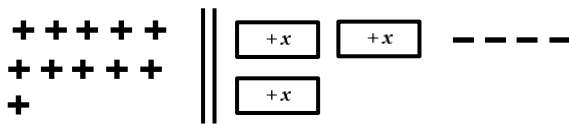|	
5. $2x + 6 = 12$ $\boxed{+x}$ $\boxed{+x}$ $\begin{array}{c}+ + + + + \\ +\end{array}$ ‖ $\begin{array}{c}+ + + + + \\ + + + + + \\ + +\end{array}$	**6.** $3(x + 1) = -9$ $\boxed{+x}$ **+** $\boxed{+x}$ **+** ‖ $\begin{array}{c}- - - - - \\ - - - -\end{array}$ $\boxed{+x}$ **+**
7. $11 = 3x - 4$ $\begin{array}{c}+ + + + + \\ + + + + + \\ +\end{array}$ ‖ $\boxed{+x}$ $\boxed{+x}$ $- - - -$ $\boxed{+x}$	**8.** $-14 = 3x - 2$ $\begin{array}{c}- - - - - \\ - - - - - \\ - - - -\end{array}$ ‖ $\boxed{+x}$ $\boxed{+x}$ $- -$ $\boxed{+x}$
9. $4x + 3 = -9$ $\boxed{+x}$ $\boxed{+x}$ **+ + +** ‖ $\begin{array}{c}- - - - - \\ - - - -\end{array}$ $\boxed{+x}$ $\boxed{+x}$	**10.** $4x - 3 = -11$ $\boxed{+x}$ $\boxed{+x}$ $- - -$ ‖ $\begin{array}{c}- - - - - \\ - - - - - \\ -\end{array}$ $\boxed{+x}$ $\boxed{+x}$

Name_____ Date_____

Learning Target: I will solve multi-step linear equations.

Directions: Solve each equation for *x*. (Work time: 4 minutes)

1. $31 \ = \ 5x \ + \ 6$	**2.** $2 \ - \ 3x \ = \ 11$
3. $-10 \ + \ 5x \ = \ 40$	**4.** $2(x \ + \ 9) \ = \ 24$
5. $\dfrac{1}{5}(x \ - \ 2) \ = \ 8$	**6.** $\dfrac{3}{4}x \ + \ 10 \ = \ -14$

Learning Target: I will solve equations with more than one step

8th Grade - RS 6 - 7.EE.4a

Session 7: Guided Practice (We Do)

We Do Together: (Teacher Actions)

➢ Translate the equation into a phrase with meaning. Then, complete the math drawing to find the solution.

1. *"1 third of what number plus 5 is equal to 12?"*

$$\frac{1}{3}x + 5 = 12$$

+x-tile

2.

$$\frac{1}{4}x - 5 = -3$$

+x-tile

3.

$$2 = \frac{2}{5}x - 4$$

+x-tile

4.

$$\frac{3}{4}x + 1 = 16$$

+x-tile

Learning Target: I will solve equations with more than one step

Session 7: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

➢ Students take turns leading to solve each 1-step equation.

5. *"1 fourth of what number plus 2 is equal to 9?"* $$\frac{1}{4}x + 3 = 10$$ [+x] $+ + +$ ‖ $+ + + + +$ $+ + + + +$ ▭ *+x-tile*	**6.** $$\frac{2}{3}x - 2 = 4$$ [ ] $- -$ ‖ $+ + + +$ ▭ *+x-tile*
7. $$8 = 3x + 2$$ $+ + + + +$ ‖ $[+x]$ $[+x]$ $+ +$ $+ + +$ $[+x]$	**8.** $$\frac{1}{3}x - 2 = 4$$ [+x] $- -$ ‖ $+ + + +$ ▭ *+x-tile*
9. $$9 = \frac{3}{5}x - 3$$ $+ + + + +$ ‖ [ ] $- - -$ $+ + + +$ ▭ *+x-tile*	**10.** $$4x + 6 = 18$$ $[+x]$ $[+x]$ $+ + + + +$ ‖ $+ + + + +$ $[+x]$ $[+x]$ $+$ $\quad\quad$ $+ + + + +$ $\quad\quad\quad\quad\quad\quad\quad\quad$ $+ + + + +$ $\quad\quad\quad\quad\quad\quad\quad\quad$ $+ + +$

Quick Check - Form G

8th Grade – Readiness Standard 6 – 7.EE.4a

Name_____ Date_____

Learning Target: I will solve multi-step linear equations.

Directions: Solve each equation for *x*. (Work time: 4 minutes)

1. $$14 = 4x + 2$$	**2.** $$5 - 2x = 19$$
3. $$-7 + 4x = 21$$	**4.** $$3(x + 4) = 24$$
5. $$\frac{1}{3}(x - 6) = 7$$	**6.** $$\frac{4}{5}x + 3 = -17$$

© OAISD, November 2018
54

Learning Target: I will solve equations with more than one step   8th Grade - RS 6 - 7.EE.4a

Session 8: Guided Practice (We Do)

We Do Together: (Teacher Actions)

➢ Translate the equation into a phrase to understand the equality. Then, show each step using numbers and symbols to find the solution.

1.	2.	3.
$18 = 4x - 2$	$2(x + 4) = 16$	$\frac{2}{3}x + 6 = 12$

Learning Target: I will solve equations with more than one step   8th Grade - RS 6 - 7.EE.4a

Session 8: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

➢ Students take turns leading to show each step using numbers and symbols to find the solution.

4. $2x + 3 = 9$	5. $3(x + 2) = -6$	6. $-18 = 3x - 6$
7. $\frac{1}{4}x + 3 = 10$	8. $\frac{2}{3}x - 8 = -2$	9. $1 = \frac{2}{5}x - 13$

Quick Check - Form H

8th Grade – Readiness Standard 6 – 7.EE.4a

Name_____ Date_____

Learning Target: I will solve multi-step linear equations.

Directions: Solve each equation for *x*. (Work time: 4 minutes)

1. $$20 = 6x + 8$$	**2.** $$7 - 5x = 32$$
3. $$-9 + 8x = 15$$	**4.** $$4(x + 2) = 28$$
5. $$\frac{1}{2}(x - 4) = 10$$	**6.** $$\frac{3}{5}x + 5 = -25$$