

Unit 4 Lesson 5: Solving Any Linear Equation

1 Equation Talk (Warm up)

Student Task Statement

Solve each equation mentally.

$$5 - x = 8$$

$$-1 = x - 2$$

$$-3x = 9$$

$$-10 = -5x$$

2 Trading Moves

Student Task Statement

Your teacher will give you 4 cards, each with an equation.

1. With your partner, select a card and choose who will take the first turn.
2. During your turn, decide what the next move to solve the equation should be, explain your choice to your partner, and then write it down once you both agree. Switch roles for the next move. This continues until the equation is solved.
3. Choose a second equation to solve in the same way, trading the card back and forth after each move.
4. For the last two equations, choose one each to solve and then trade with your partner when you finish to check one another's work.

3 A Puzzling Puzzle

Student Task Statement

Tyler says he invented a number puzzle. He asks Clare to pick a number, and then asks her to do the following:

- Triple the number
- Subtract 7
- Double the result
- Subtract 22
- Divide by 6

Clare says she now has a -3. Tyler says her original number must have been a 3. How did Tyler know that? Explain or show your reasoning. Be prepared to share your reasoning with the class.