

Algebra Levels

Choose a level for this assignment, then answer them on your POD paper. Show each step!

Level 1: Need practice doing the steps.

1. Solve the following equations and show each step. All answers will be whole numbers.

- | | | |
|-----------------------|---------------------------|--------------------------|
| a. $7x + 25 = 53$ | b. $\frac{x}{4} - 8 = 17$ | c. $-3x + 26 = 11$ |
| d. $8x + 7 = 5x + 16$ | e. $6x - 17 = 2x + 7$ | f. $4x + 19 = 2x + 1$ |
| g. $4(7x + 3) = 68$ | h. $3(5x - 11) = 72$ | i. $2(6x - 8) = 9x + 14$ |

2. Solve the following equations and show each step. Give your answer as a reduced fraction.

- | | | |
|------------------------|---------------------|-------------------------|
| a. $8x - 7 = 3$ | b. $9x + 13 = 19$ | c. $7x + 6 = 3x + 32$ |
| d. $3x + 5 = 11x + 25$ | e. $3(3x + 7) = 24$ | f. $2(9x - 4) = 6x + 7$ |

Level 2: Need practice with the negatives.

1. Solve the following equations and show each step. All answers will be whole numbers.

- | | | |
|------------------------------|--------------------------|---------------------------|
| a. $\frac{x}{-6} - 14 = -23$ | b. $2x - 17 = 8x - 65$ | c. $-9x + 5 = -5x - 39$ |
| d. $6(2x - 9) = -102$ | e. $3(4x + 7) = 10x - 7$ | f. $2(11 - 7x) - 7 = -55$ |

2. Solve the following equations and show each step. Give your answer as a reduced fraction.

- | | |
|-------------------------------|-----------------------------|
| a. $28x + 18 = -6$ | b. $9x - 4 = -3x - 37$ |
| c. $3(5x - 9) = -15$ | d. $-4x - 8 - 11 = 6x - 44$ |
| e. $6(4x - 8) - 27x = 9x + 2$ | |

Level 3: Need harder problems.

1. Solve the following equations and show each step.

If the answer is not a whole number, give it as a reduced fraction.

- | | |
|---|---|
| a. $8(x - 5) = -7x$ | b. $6(x - 9) - 7x = -21$ |
| c. $3(5x - 25) = 6(4x - 9)$ | d. $4(3x - 8) = -4x - 35 - 93$ |
| e. $-16x + 8(3x - 9) = -16$ | f. $5(2x - 1) - 9x - 19 = 7(x + 6) - 3$ |
| g. $3(5 - 4x) + 6(x - 9) = 4(x - 3) - 3x + 1$ | |

2. I have a mystery fraction. The sum of 7 and 18 times the number is 11 less than quadruple the number. What is the mystery fraction? Let x represent the mystery number. Write and solve an equation for the situation.