Name _____ Date _____

Multi-Step Linear Equations: Distributing, Like Terms and Variables on Both Sides

Directions: Answer each question. Type number answers with digits, and use a decimal point when needed.

1. Solve $5x - 7 = 2x + 11$. What is x?

_____

2. Solve $4(x - 3) = 2x + 6$.

_____

3. Which equations have $x = 4$ as their solution? Select the 3 that apply.

☐ A. $2(x - 3) = x + 1$ ☐ B. $2(x + 3) = 5x - 6$ ☐ C. $0.5x + 7 = 2x + 1$

☐ D. $3x + 5 = x + 13$ ☐ E. $4x - 1 = 2x + 9$

4. Solve $0.5(8x - 6) = 3x + 4.5$. Type your answer as a decimal.

_____

5. Solve $(2/3)x + 5 = (1/3)x + 9$.

_____

6. Solve $7x + 2 = 4x - 3$.

A. $x = -5$ B. $x = -1/3$ C. $x = -5/3$ D. $x = 5/3$

7. Phone plan A costs $30 a month plus $0.05 for each text. Plan B costs $20 a month plus $0.15 for each text. For how many texts in a month do the two plans cost the same?

_____ texts

8. Malik solved $7x - 3(x + 4) = 2x + 6$. His work is shown.

1. $7x - 3x - 12 = 2x + 6$
2. $4x - 12 = 2x + 6$
3. $6x - 12 = 6$
4. $x = 3$

Which step has the first mistake?

A. $6x - 12 = 6$ B. $7x - 3x - 12 = 2x + 6$

C. $4x - 12 = 2x + 6$ D. There is no mistake.

E. $x = 3$