Routine Linear Solving Practice #3

1. $1 + 2x = 2$

2. $6x - 9 = -4$

3. $11x - 4 = 11$

4. $5 - 9x = 7$

5. $8x - 7 = 2$

6. $12x + 9 = -12$

7. $10x + 3 = 5$

8. $12 + 8x = -10$

9. $8x + 7 = -4$

10. $3 + 2x = 11$

11. $3(x - 3) = -11$

12. $11x + 5 = 2x - 12$

13. $2(1 - 6x) = 11$

14. $14 + 10x = 3x$

15. $-1 = -2 - 7x$

16. $8x + 13 = 0$

17. $12x + 1 = 5x - 12$

18. $11 - 6x = 6 - 5x$

19. $6x + 6 = 2x - 3$

20. $2 + 5x = -5 - 3x$

Answers: Routine Linear Solving Practice #3

The middle steps shown are to help locate errors. Students should show more working than this.

1.	$1 + 2x = 2$	$2x = 2 - 1$	$x = 1 \div 2$	$x = 0.5$	$= {}^{1}/_{2}$
2.	$6x - 9 = {}^{-}4$	$6x = -4 + 9$	$x = 5 \div 6$	$x = 0.833$	$= {}^{5}/_{6}$
3.	$11x - 4 = 11$	$11x = 11 + 4$	$x = 15 \div 11$	$x = 1.364$	$= {}^{15}/_{11}$
4.	$5 - 9x = 7$	$-9x = 7 - 5$	$x = 2 \div -9$	$x = {}^{-}0.222$	$= {}^{-2}/_{9}$
5.	$8x - 7 = 2$	$8x = 2 + 7$	$x = 9 \div 8$	$x = 1.125$	$= {}^{9}/_{8}$
6.	$12x + 9 = {}^{-}12$	$12x = {}^{-}12 - 9$	$x = {}^{-}21 \div 12$	$x = {}^{-}1.75$	$= {}^{-7}/_{4}$
7.	$10x + 3 = 5$	$10x = 5 - 3$	$x = 2 \div 10$	$x = 0.2$	$= {}^{1}/_{5}$
8.	$12 + 8x = {}^{-}10$	$8x = {}^{-}10 - 12$	$x = {}^{-}22 \div 8$	$x = {}^{-}2.75$	$= {}^{-11}/_{4}$
9.	$8x + 7 = {}^{-}4$	$8x = {}^{-}4 - 7$	$x = {}^{-}11 \div 8$	$x = {}^{-}1.375$	$= {}^{-11}/_{8}$
10.	$3 + 2x = 11$	$2x = 11 - 3$	$x = 8 \div 2$	$x = 4$	
11.	$3(x - 3) = {}^{-}11$	$3x - 9 = {}^{-}11$	$3x = {}^{-}11 + 9$	$x = {}^{-}0.667$	$= {}^{-2}/_{3}$
12.	$11x + 5 = 2x - 12$	$11x - 2x + 5 = {}^{-}12$	$9x = {}^{-}12 - 5$	$x = {}^{-}1.889$	$= {}^{-17}/_{9}$
13.	$2(1 - 6x) = 11$	$2 - 12x = 11$	$-12x = 9$	$x = {}^{-}0.75$	$= {}^{-3}/_{4}$
14.	$14 + 10x = 3x$	$14 = 3x - 10x$	$14 \div -7 = x$	$x = {}^{-}2$	$= {}^{-}2$
15.	${}^{-}1 = {}^{-}2 - 7x$	${}^{-}1 + 2 = {}^{-}7x$	$1 \div {}^{-}7 = x$	$x = {}^{-}0.143$	$= {}^{-1}/_{7}$
16.	$8x + 13 = 0$	$8x = 0 - 13$	$8x = {}^{-}13$	$x = {}^{-}1.625$	$= {}^{-13}/_{8}$
17.	$12x + 1 = 5x - 12$	$12x - 5x + 1 = {}^{-}12$	$7x + 1 = {}^{-}12$	$x = {}^{-}1.857$	$= {}^{-3}/_{7}$
18.	$11 - 6x = 6 - 5x$	$11 - 6x + 5x = 6$	$-1x = 6 - 11$	$x = 5$	
19.	$6x + 6 = 2x - 3$	$6x - 2x + 6 = {}^{-}3$	$4x = -3 - 6$	$x = {}^{-}2.25$	$= {}^{-9}/_{4}$
20.	$2 + 5x = {}^{-}5 - 3x$	$2 + 5x + 3x = {}^{-}5$	$8x = {}^{-}5 - 2$	$x = {}^{-}0.875$	$= {}^{-7}/_{8}$

It is preferable to leave answers in improper fraction form, provided it is simplified and any negative sign is on the numerator. Decimal form is **not** better.