Equations Test Review

Name:_____ Period:_____

Solve each of the equations.

C- Section problems

1. $x + 5 = -3$

2. $2x + 8 = 1$

3. $2(3x + 7) = 15$

4. $3x + 5(2x - 3) = -67$

5. $\frac{1}{2}(2x + 8) = 7$

6. $0.3(6 - 2.5x) + 3.1 = 9.4$

7. $\frac{x}{8} = -3$

8. $3x + 6 = 21$

9. $3(4x + 2) = 10$

10. $3x + 5(2x - 3) = -28$

11. $\frac{1}{2}(2x + 8) = 9$

12. $0.3(6 - 2.5x) + 3.1 = 10.15$

B-Section problems

13. $2x + 5x - 3 = 15x - 7$

14. $2(2x + 5) - 6 = 6x + 10 - 2x - 6$

15. $3(2x + 9) - 7 = 6x + 30 - 15$

16. $3x + x - 6 = 4x - 7 + 8$

17. $2(3x + 5) - 6 = 6x + 10 - 2 - 6$

18. $5(2x + 9) - 27 = 6x + 4x + 18$

A- Section problems

19. Write an example of an equation that would result in <u>no solutions</u>.

20. Write an example of an equation that would result in <u>one solution.</u>

21. Write an example of an equation that would result in <u>infinitely many solutions.</u>

olve each of the equations.

- Section problems

1. $x + 5 = -3$

$-5 \quad -5$

$x = -8$

2. $2x + 8 = 1$

$-8 \quad -8$

$\frac{2x}{2} = \frac{-7}{2}$

$x = -\frac{7}{2}$

3. $2(3x + 7) = 15$

$6x + 14 = 15$

$-14 \quad -14$

$\frac{6x}{6} = \frac{1}{6}$

$x = \frac{1}{6}$

4. $3x + 5(2x - 3) = -67$

$3x + 10x - 15 = -67$

$13x - 15 = -67$

$+15 \quad +15$

$\frac{13x}{13} = \frac{-52}{13}$

$x = -2$

5. $\frac{1}{2}(2x + 8) = 7$

$1x + 4 = 7$

$-4 \quad -4$

$x = 3$

6. $0.3(6 - 2.5x) + 3.1 = 9.4$

$1.8 - .75x + 3.1 = 9.4$

$4.9 - .75x = 9.4$

$-4.9 \quad -4.9$

$\frac{-.75x}{-.75} = \frac{4.5}{-.75}$

$x = -6$

7. $\frac{x}{8} = -3$

$\frac{8x}{8} = -24$

$x = -24$

8. $3x + 6 = 21$

$-6 \quad -6$

$\frac{3x}{3} = \frac{15}{3}$

$x = 5$

9. $3(4x + 2) = 10$

$12x + 6 = 10$

$-6 \quad -6$

$\frac{12x}{12} = \frac{4}{12}$

$x = \frac{1}{3}$

10. $3x + 5(2x - 3) = -28$

$3x + 10x - 15 = -28$

$13x - 15 = -28$

$+15 \quad +15$

$\frac{13x}{13} = \frac{-13}{13}$

$x = -1$

11. $\frac{1}{2}(2x + 8) = 9$

$1x + 4 = 9$

$-4 \quad -4$

$x = 5$

12. $0.3(6 - 2.5x) + 3.1 = 10.15$

$1.8 - .75x + 3.1 = 10.15$

$4.9 - .75x = 10.15$

$-4.9 \quad -4.9$

$\frac{-.75x}{-.75} = \frac{5.25}{-.75}$

$x = -7$

B-Section problems

13. $2x + 5x - 3 = 15x - 7$

$7x - 3 = 15x - 7$

$-15x \quad -15x$

$-8x - 3 = -7$

$+3 \quad +3$

$-8x = -4$

$\frac{-8x}{-8} = \frac{-4}{-8}$

$x = \frac{1}{2}$

14. $2(2x + 5) - 6 = 6x + 10 - 2x - 6$

$4x + 10 - 6 = 4x + 4$

$4x + 4 = 4x + 4$

$-4x \quad -4x$

$4 = 4$

Always True or All solutions or ∞ many solutions

15. $3(2x + 9) - 7 = 6x + 30 - 15$

$6x + 27 - 7 = 6x + 15$

$6x + 20 = 6x + 15$

$-6x \quad -6x$

$20 \neq 15$

No Solution

16. $3x + x - 6 = 4x - 7 + 8$

$4x - 6 = 4x + 1$

$-4x \quad -4x$

$-6 \neq 1$

No solution

$\emptyset$

17. $2(3x + 5) - 6 = 6x + 10 - 2 - 6$

$6x + 10 - 6 = 6x + 2$

$6x + 4 = 6x + 2$

$-6x \quad -6x$

$4 \neq 2$

No solution

$\emptyset$

18. $5(2x + 9) - 27 = 6x + 4x + 18$

$10x + 45 - 27 = 10x + 18$

$10x + 18 = 10x + 18$

$-10x \quad -10x$

$18 = 18$

Always True or ∞ many solutions

A- Section problems

19. Write an example of an equation that would result in <u>no solutions</u>.

Any equation where the x's match exactly but the numbers don't.

20. Write an example of an equation that would result in <u>one solution.</u>

Any equation where the x's don't match exactly (don't cancel out).

21. Write an example of an equation that would result in <u>infinitely many solutions.</u>

Any equation where the x's match exactly and the numbers do, too.