Multi-Step Algebra Problems Name _____

In each problem, solve for x.

1. $4 + 11 = 3x - 6$	**6.** $36 = 16 + 2 \cdot 12(x - 12)$
2. $55 = 12x^2 - 53$	**7.** $100 = 64 + 2 \cdot 10(x - 30)$
3. $19x = 24x - 15$	**8.** $81 = 25 + 2 \cdot 4(18 - x)$
4. $6 = \frac{24}{x}$	**9.** $64 = 16 + 2 \cdot 7(20 - x)$
5. $19 = \frac{31}{x}$	**10.** $100 = \frac{2 \cdot 4 \cdot 6}{x}$

11. $24 = 6\sqrt{\frac{x}{3}}$	**16.** $120 = \frac{3 \cdot 9 \cdot 12}{x^2}$
12. $40 = \frac{1}{4}\sqrt{\frac{x+10}{3}}$	**17.** $300 = \frac{12 \cdot 3x}{9^2}$
13. $50 = \frac{2}{3}\sqrt{\frac{x+13}{0.4}}$	**18.** $400 = \frac{3 \cdot 2 \cdot (10-2)}{x^2}$
14. $500 = \frac{1}{2} \cdot 4 \cdot x^2 + 4 \cdot 10 \cdot 12$	**19.** $\frac{1}{x} = \frac{1}{2} + \frac{1}{4}$
15. $200 = \frac{1}{2} \cdot x \cdot 5^2 + x \cdot 10 \cdot 14$	**20.** $\frac{1}{10} = \frac{1}{x} + \frac{1}{20}$

Answers:

1. 7
2. 3
3. 3
4. 4
5. 1.63
6. 12.83
7. 31.8
8. 11
9. 16.57
10. 0.48
11. 48
12. 76,790
13. 2,237
14. 3.16
15. 1.31
16. 1.64
17. 675
18. 0.34
19. 1.33
20. 20