

Name:

Date:

Period:

Show all your work on a separate piece of paper.

1. $5y^2 = 45$

2. $2x^2 - 11 = 39$

3. $4y^2 - 2.5 = y^2 + 4.25$

4. $2x^2 - 32 = 0$

5. $6x^2 - 4x^2 = 98$

6. $3k^2 = 147$

7. $\frac{1}{2}x^2 = 50$

8. $\frac{y^2}{3} = 12$

9. $\frac{4x}{25} = \frac{9}{x}$

10. $4x^2 - 46 = 210$

11. $2x^2 + 3x^2 = 720$

12. $r^2 - 11 = 70$

In each case, solve for x in **simplest radical form**.

13. $x^2 = 20$

14. $x^2 + 25 = 100$

15. $8x^2 - 6x^2 = 126$

16. $2x^2 - 16 = 0$

17. $3x^2 - 28 = 2x^2 + 33$

18. $x^2 - 4 = 14$

In each case, find the positive value of x, **correct to the nearest thousandth**.

19. $x^2 = 24$

20. $4x^2 - 160 = 0$

21. $7x^2 = x^2 + 198$

In each case, solve for x in terms of the other variable(s).

22. $x^2 = b^2$

23. $9x^2 = r^2$

24. $x^2 + a^2 = c^2$

25. $x^2 = 25a^2$

26. $4x^2 - a^2 = 0$

27. $x^2 + b^2 = c^2$

In each case, solve for the indicated variable **in terms of the other variable(s)**.

28. Solve for s: $s^2 = A$ 29. Solve for r: $S = 4\pi r^2$ 30. Solve for t: $s = \frac{1}{2}gt^2$ 31. Solve for v: $F = \frac{mv^2}{gr}$