Name: Date:

Radical Review

Directions: Write the radicals in simplest radical form

1. $\sqrt{150}$
2. $\sqrt{20}$
3. $\sqrt{48}$
4. $\sqrt{6}\cdot\sqrt{20}$
5. $7\sqrt{121}$
6. $\sqrt[3]{27}$
7. $\sqrt{\frac{9}{64}}$
8. $3\sqrt{3}+9\sqrt{3}-4\sqrt{3}$
9. $5\sqrt{5}+3\sqrt{36}+2\sqrt{80}$
10. $3\sqrt[3]{5}+10\sqrt[3]{5}-2\sqrt[3]{5}$
11. $\sqrt{\frac{9}{100}}$
12. $\sqrt{\frac{4}{25}}$
13. $\sqrt{\frac{20}{27}}$
14. $\sqrt{\frac{27}{8}}$
15. $\left(\sqrt{2}+\sqrt{3}\right)\sqrt{6}$
16. $\sqrt{8}\left(\sqrt{2}+\sqrt{3}\right)$
17. $\sqrt{64x^4}$
18. $\sqrt{xy^3}\cdot\sqrt{x^3y}$
19. $\sqrt{\frac{x}{y^4}}$

20. $\sqrt{\frac{50}{z^5}}$

21. $5\sqrt[3]{432a^5b^6}$

22. $\sqrt{144x^2}$

23. $\sqrt[3]{3,456}$

24. $\sqrt{81q^6}$

25. $\sqrt{75z^{18}}$

26. $\sqrt{2x+7}=5$

27. $\sqrt{1-2x}=-4$

28. $\sqrt[3]{2,187}$

29. $\sqrt{3x-5}=5$

30. $3\sqrt{5}+4\sqrt{5}$

31. $6\sqrt{3}-2\sqrt{3}$

32. $\sqrt{5}\cdot\sqrt{20}$

33. $\frac{3}{\sqrt{2}}$

34. $\sqrt{5}\left(6\sqrt{2}-\sqrt{5}\right)$

35. $\frac{4}{\sqrt{20}}$

36. $\sqrt{3}+\sqrt{27}$

37. $7\sqrt{5}-\sqrt{125}$

38. $\sqrt[3]{64x^3}$

39. $4\sqrt[3]{434n^4}$

40. $\sqrt[3]{x^3y^9z^6}$

ANSWER KEY

1. $5\sqrt{6}$
2. $2\sqrt{5}$
3. $4\sqrt{3}$
4. $2\sqrt{30}$
5. 77
6. 3
7. $\frac{3}{8}$
8. $8\sqrt{3}$
9. $13\sqrt{5}+18$
10. $11\sqrt[3]{5}$
11. $\frac{3}{10}$
12. $\frac{2}{5}$
13. $\frac{2}{9}\sqrt{15}$
14. $\frac{3}{4}\sqrt{6}$
15. $2\sqrt{3}+3\sqrt{2}$
16. $4+2\sqrt{6}$
17. $8x^2$
18. x^2y^2
19. $\frac{\sqrt{x}}{y^2}$
20. $\frac{5\sqrt{2z}}{z^3}$
21. $30ab^2\sqrt[3]{2a^2}$
22. $12x$
23. $12\sqrt[3]{2}$
24. $9q^3$
25. $5\sqrt{3}z^9$
26. 9
27. No solution
28. $9\sqrt[3]{3}$
29. 10
30. $7\sqrt{5}$
31. $4\sqrt{3}$
32. 10
33. $\frac{3\sqrt{2}}{2}$
34. $6\sqrt{10}-5$
35. $\frac{2\sqrt{5}}{5}$
36. $4\sqrt{3}$
37. $2\sqrt{5}$
38. 4x
39. $28n\sqrt[3]{n}$
40. xy^3z^2