SM2H 2.2 Exponent Review and Rational Exponents Key

1. $2n^7$
2. 3^2 or 9
3. $3q^2$
4. $\frac{1}{4t^3}$
5. u^{14}
6. $\frac{1}{v^{21}}$
7. w^4
8. $\frac{32}{x}$
9. $\frac{2b^4}{3c^2}$
10. $\frac{14}{q^8 r^3}$
11. $56m^{10}n$
12. $\frac{2v^3}{u}$
13. $\frac{625x^4z^{12}}{y^8}$
14. $\frac{d^{16}}{256c^{12}}$
15. $\frac{h^{17}}{k^{24}}$
16. $\frac{p}{4q^{11}}$
17. $\frac{9u^2}{v^8}$
18. $2g^{10}h^{14}k^{16}$
19. $\frac{m^{27}}{n}$
20. $\frac{r^8t^2}{3}$
21. $\frac{y^2z}{36x^{13}}$
22. A negative exponent indicates a reciprocal. It means that the base should be moved from the numerator to the denominator or vice versa and then be raised to the absolute value of the negative exponent.

23. You can think of x^0 as meaning that all of the x's in an expression have cancelled out. When everything cancels out in a multiplication or division problem, you are left with 1.

24. $\sqrt[3]{y}$
25. $\sqrt[5]{a^2b^2}$
26. $4\sqrt[4]{x}$
27. $\sqrt[6]{t^5}$ or $\left(\sqrt[6]{t}\right)^5$
28. $\left(\sqrt[4]{16}\right)^3$ or $\left(\sqrt[4]{16^3}\right)$ or 8
29. $\left(\sqrt[3]{27}\right)^4$ or $\left(\sqrt[3]{27^4}\right)$ or 81
30. $(pq)^{1/5}$
31. $(10v)^{1/4}$
32. $3z^{1/2}$
33. $4x^{2/3}$
34. $(3n)^{4/5}$
35. $\left(2a^5b\right)^{7/6}$
36. $\frac{1}{9^{1/2}} = \frac{1}{3}$
37. $\frac{1}{27^{2/3}}$ or $\frac{1}{9}$
38. $\frac{5}{(xy)^{4/5}}$
39. $3^{5/7}$
40. $y^{1/2}$
41. $x^{3/2}$
42. $m^{1/2}$
43. $\frac{1}{c^{1/4}}$
44. $p^{2/3}$
45. $h^{1/2}$
46. $\frac{1}{n^{1/9}}$
47. $k^{14/5}$
48. $4t^{5/4}$
49. $\frac{w^{1/5}}{v^{1/6}}$
50. $\frac{xy^{4/3}}{z^{5/2}}$
51. $\sqrt[3]{q}$
52. $\sqrt{a^9}$
53. x^4y^2
54. $\sqrt[10]{r^9}$
55. $\sqrt[12]{s}$
56. $\sqrt[6]{z}$
57. $2^3 \cdot 3 \cdot 5$
58. $2^3 \cdot 3^2$
59. Reflect over the x-axis
Shift left 1
Shift down 5
60. $f(-3) = -4$