UNIT 3 Practice Test

Simplify

1) $9^{3/2}$
2) $\sqrt[3]{54}$
3) $16^{2/5}$
4) $64^{-3/2}$
5) $\sqrt[4]{8} \cdot \sqrt[4]{4}$
6) $\frac{1}{32^{-4/5}}$
7) $4^{1/3} + 5(4^{1/3})$

Write the expression in simplest form

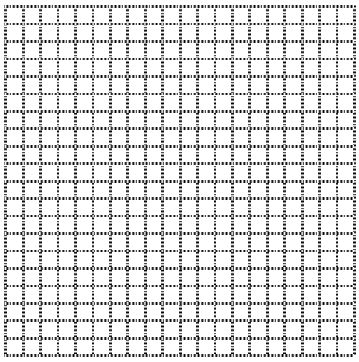
8) $x^{2/5} \cdot x^{5}$
9) $\sqrt[3]{81x^7y^2}$
10) $5\sqrt{32} - 11\sqrt{50}$
11) $x^{5} \cdot x^{\sqrt{3}}$
12) $\sqrt[4]{3x^9y^7}$
13) $(4^{2/3} \cdot 5^{3/4})^{3}$

Find the solutions. Check for extraneous solutions.

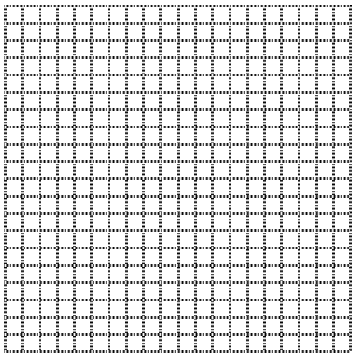
14) $\sqrt[3]{2x-3} + 5 = 8$
15) $\sqrt{2x-11} = 3$
16) $\sqrt[3]{5x+4} + 5 = 6$
17) $x + 2 = \sqrt{2x+7}$

Graph the function and state the domain and range

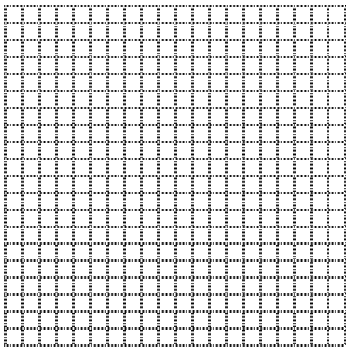
18) $f(x) = 2(x - 1)^{1/2} - 3$



19) $g(x) = (x-3)^{1/3} + 4$



20) f(x) = - $\sqrt{x} - 5$



21) g(x) = - $\sqrt[3]{x+1} - 2$