

Simplify each expression.

1) $\frac{x^{\frac{2}{3}}y^{\frac{5}{3}}}{x^{\frac{1}{2}}y^4}$

2) $\sqrt[3]{-54}$

3) $\left(x^{\frac{2}{3}}y^{\frac{1}{4}}z^{-3}\right)^2$

1) _____

2) _____

3) _____

4) $\left(x^{\frac{1}{2}}y\right)^3 \left(x^0y^{\frac{1}{3}}\right)^2$

5) $\sqrt[3]{8x^4y^2z^3}$

4) _____

5) _____

Rewrite in radical form

6) $2x^{\frac{2}{3}}$

Rewrite in rational exponent form

7) $\sqrt[5]{x^3}$

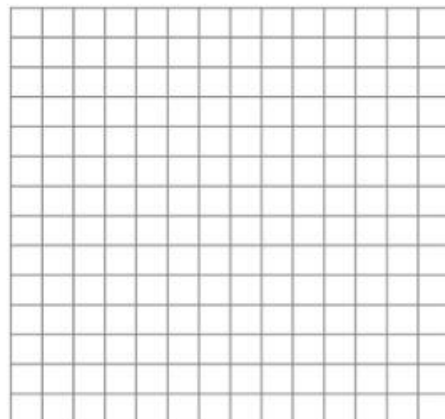
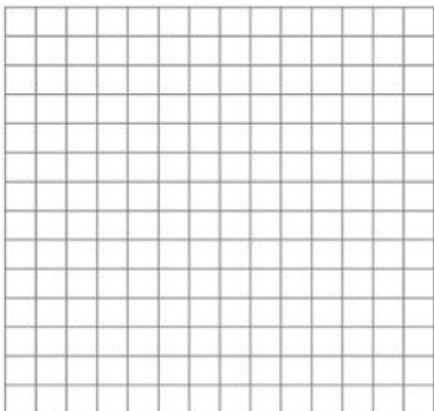
6) _____

7) _____

Graph each square root function (with no calculator) and state the domain and range.

8) $y = \sqrt{x+3} - 2$

9) $y = -2\sqrt{x-1}$



Solve each equation.

10) $\sqrt{x+3} + 4 = 8$

11) $\sqrt{2x+6} - x = 3$

10) _____

11) _____

12) The current (in ampere) a machine need to reach a certain power can be modeled by the equation $I = 0.2\sqrt{P}$, where P is the power of machine in watt. If the current is 10 amperes, what is the power of machine in watt?

12) _____