

- 1) Find the square root of 36. What is the principal square root?

$$\text{Square root} = 6, -6 \quad /5$$

$$\sqrt{36} = 6 \quad /5$$

- 2) Find the specified functional value if it exists. $f(x) = \sqrt{5x-10}$

$$f(1) = \sqrt{5(1)-10} = \sqrt{-5} \Rightarrow \text{no real solution} \quad /5$$

$$f(0) = \sqrt{5(0)-10} = \sqrt{-10} \Rightarrow \text{no real solution} \quad /5$$

- 3) Simplify. Remember to use absolute value notation. $\sqrt{y^2+4y+4}$

$$\sqrt{y^2+4y+4} = \sqrt{(y+2)^2} = |y+2| \quad /5$$

4) Write an equivalent statement using radical notation:

$$(a^2b^2)^{\frac{1}{5}} = \sqrt[5]{a^2b^2} = (\sqrt[5]{ab})^2 \quad /s$$

5) Write an equivalent statement using exponential notation simplify if possible

$$\sqrt{\sqrt{x^8}} = \sqrt{(x^8)^{1/2}} = \sqrt{x^4} = (x^4)^{1/2} = x^2 \quad /s$$

6) Write an equivalent expression with positive exponents and if possible, simplify.

$$\frac{5x^{-1}}{6y^{-3}} = \frac{5y^3}{6x^1} \quad /s$$