Secondary Math 3 Name_____



# Winter Break Extra Credit

Date_____ Period____

**Solve each equation with the quadratic formula.**

1) $r^2 - 2r - 24 = 0$

2) $2a^2 + 5a - 2 = 0$

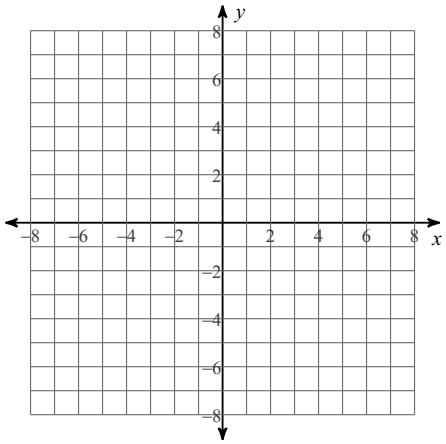
**Solve each equation. Remember to check for extraneous solutions.**

3) $\sqrt{4b + 8} - b = 3$

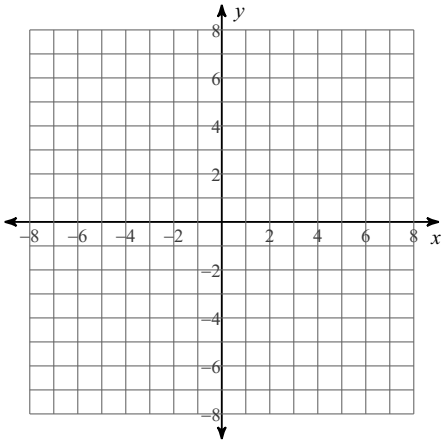
4) $n - 4 = \sqrt{10 - n}$

**Identify the domain and range of each. Then sketch the graph.**

5) $y = -\frac{4}{5}\sqrt{x}$




6) $y = \sqrt{x - 1} + 4$



**Simplify each and state the excluded values.**

7) $\dfrac{5}{15v+40} \div \dfrac{v+1}{27v+72}$

8) $\dfrac{1}{5x-10} \cdot \dfrac{5x+50}{x-2}$

9) $\dfrac{3}{x+2} - \dfrac{6}{x-5}$

10) $\dfrac{6m}{2} - \dfrac{4m+4}{3m+15}$

**Solve each equation. Remember to check for extraneous solutions.**

11) $\dfrac{1}{k+4} = \dfrac{k^2-3k-10}{k^2+2k-8} + \dfrac{3}{k^2+2k-8}$

12) $\dfrac{1}{6} + \dfrac{1}{m} = \dfrac{m-2}{3m^2}$

**Find the inverse of each function.**

13) $f(x) = \dfrac{2}{x-2} + 1$

14) $f(x) = 4x - 16$