**Grade 11 Overall Review Skills**

**1. Use transformations to graph the following and state the domain and range.**

**a)** $y=\sqrt{2x-6}-4$ **b)** $y=-2|x+4|+6$

|  |  |
| --- | --- |
| **x** | $$y=\sqrt{x}$$ |
| **0** | **0** |
| **1** | **1** |
| **4** | **2** |
| **9** | **3** |

|  |  |
| --- | --- |
| **x** | **y=|x|** |
| **-2** | **2** |
| **-1** | **1** |
| **0** | **0** |
| **1** | **1** |
| **2** | **2** |

k = k =

d = d =

a = a =

c = c = **Domain: \_\_\_\_\_\_\_\_ Range: \_\_\_\_\_\_\_\_\_\_\_\_ Domain: \_\_\_\_\_\_\_\_\_\_\_ Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2. Determine the exact values for each trigonometric ratio.**

 **a) tan(45o) b) sin(240o) c) cos(-405o)**

**3. Solve each trigonometric equation;** $0^{o}\leq θ\leq 360^{o}$.

**a)** $cosθ=-0.5$ **b)** $tanθ=2$

**4. Solve each exponential equation for x.**

**a)** $9^{2x-2}=27^{x+1}$ **b)** $2^{x}=100$

**5. Simplify each rational expression and state all restrictions (implicit and explicit).**

**a)** $\frac{2x+6}{3x}÷\frac{x+3}{x}$ **b)** $\frac{4}{2x+2}+\frac{6}{x^{2}-x-2}$