NAME_____DATE_____

ALGEBRA II WORKSHEET: SOLVING POLYNOMIAL INEQUALITIES

Solve each inequality. Complete your assignment on a separate sheet of paper.

1. $(x+2)(x-3)>0$

2. $(x-1)^3(x^2-2x-5)\le 0$

3. $-x\left(\frac{2}{3}x+5\right)\le 0$

4. $6x^4-13x^2+6<0$

5. $a^3+6a^2-16a-96\ge 0$

6. $g^5-8g^2\le 0$

7. $$g(x)=ax^2+24$$

For the function g defined above, a is a constant and $g(4)=8$. What is the value of $g(-4)$?

A) 8

B) 0

C) −1

D) −8

8. If $\frac{a}{b}=2$, what is the value of $\frac{4b}{a}$?

A) 0

B) 1

C) 2

D) 4

9. A line in the xy-plane passes through the origin and has a slope of $\frac{1}{7}$. Which of the following points lies on the line?

A) (0, 7)

B) (1, 7)

C) (7, 7)

D) (14, 2)