

AGS 3 Name: _____ Period: _____ Date: _____

Assignment 3.8

Find the roots, then write the equation in factored form.

1. $f(x) = x^3 - 13x^2 + 52x - 60$ Given factor: $(x - 5)$

2. $f(x) = x^3 + 6x^2 - 11x - 66$ Given factor: $(x + 6)$

3. $f(x) = x^3 + 17x^2 + 92x + 150$ Given root: $x = -3$

Refresh Your Memory

Multiply using your preferred method.

4. $(x - \sqrt{13})(x + \sqrt{13})$

5. $(x - 3\sqrt{2})(x + 3\sqrt{2})$

6. $(x - 4 + 2i)(x - 4 - 2i)$

7. $(x + 5 + 3i)(x + 5 - 3i)$

Use a $<$, $>$, or $=$ to make each statement true.

8. a. $f(0)$ _____ $g(0)$

b. $f(2)$ _____ $g(2)$

c. $f(-1)$ _____ $g(-1)$

d. $f(1)$ _____ $g(1)$

e. $f(5)$ _____ $g(5)$

f. $f(-2)$ _____ $g(-2)$

