Review Day 3

Solve.

① $\sqrt{30+x} = x$

② $\sqrt{x-2} = -10$

③ $\frac{5}{x+1} = \frac{3}{x+3}$

④ If $g(-4)=0$, then _____ is a factor.

⑤ If $f(5)=3$, then $f(x) \div (x-5)$ has a remainder of ____.

⑥ Which of the following are factors of $(x-7)^{10}-4$

A) $x+6$

B) $x+8$

C) $x-7$

D.) $x-8$

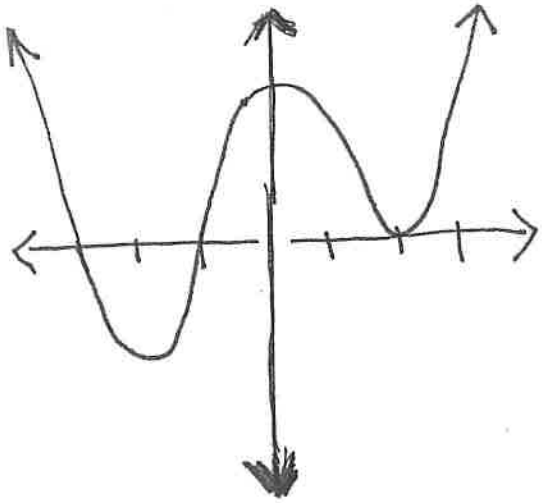
E.) $x-6$

⑦ Simplify.

$$\frac{3x^2-15x+2x-10}{12x^2+8x}$$

8. The formula for the speed of a falling object is $v = \sqrt{64d}$ were v is the speed of the object in feet per second and d is the distance the object has fallen, in feet. What distance has an object fallen if its speed is 75 feet per second?

9. Given the graph, Identify the following:



Zeros

Factored Form

Degree

Standard Form

y-Intercept

10. Given $f(x) = (x-1)(x+5)(x-3)(x-2)$, what are the x-intercepts.

11. Factor $3x^4 - 48$.

12. Find the zeros for $(x^2-4)(x^2+9)$.

13. Factor $x^6 - 64$.