Chapter 3 Practice Test

Name: _____   Time› Start: _____   Finish: _____   Total Time = _____

Factor the following into the product of two binomials. Don't forget about the GCF!

_____ 1. $x^2 + 7x + 10$ _____ 2. $x^2 + 13x + 12$

_____ 3. $2x^2 + 10x + 12$ _____ 4. $x^2 + 8x - 20$

_____ 5. $x^2 - 25$ _____ 6. $x^2 - 8x + 12$

_____ 7. $3x^2 + 15x + 12$ _____ 8. $x^2 - 12x - 28$

_____ 9. $5x^2 + 40x + 75$ _____ 10. $4x^2 + 4x - 80$

11. $f(x) = x - 2$ x-intercept = _____   y-intercept = _____

12. $f(x) = x^2 + 3x - 10$ x-intercept = _____   y-intercept = _____

13. $f(x) = 2\,|x - 1| - 8$ x-intercept = _____   y-intercept = _____

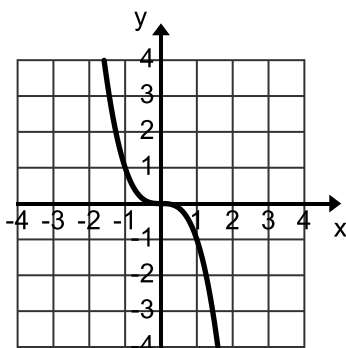14. $f(x) = \sqrt{x+4}$ x-intercept = _____   y-intercept = _____

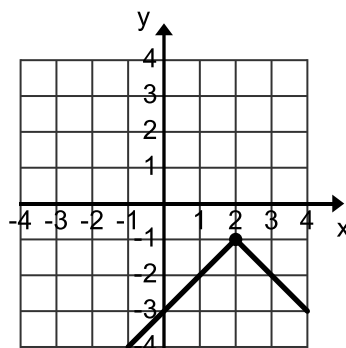15. $f(x) = (x - 2)(x + 3)$ x-intercept = _____   y-intercept = _____

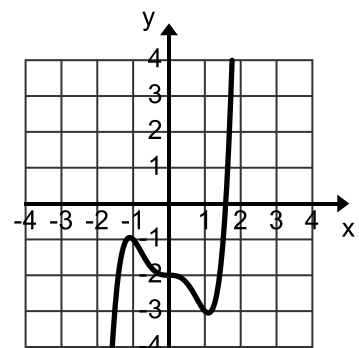16. $f(x) = x^2 - 9$ x-intercept = _____   y-intercept = _____

Graph 17	Graph 18	Graph 19

17.   Left End Behavior = _____   Right End Behavior = _____

18.   Left End Behavior = _____   Right End Behavior = _____

19.   Left End Behavior = _____   Right End Behavior = _____

Look at the equation and determine what transformations occur.
The types of transformations would be it reflects over the x-axis, stretches vertically, stretches horizontally, shift right, shift left, shift up, shift down.

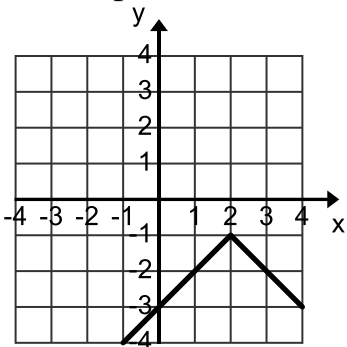20. $f(x) = \dfrac{1}{x-5} - 2$ _____

21. $f(x) = 8\sqrt[3]{x-2} + 6$ _____
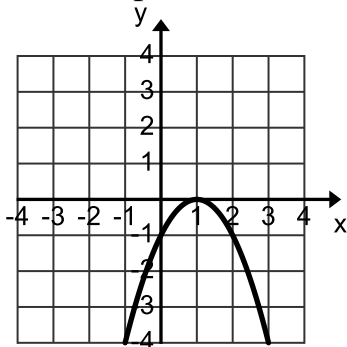
22. $f(x) = \dfrac{1}{2}(x-2)^3 - 5$ _____

23. $f(x) = -9\,|\,x+7\,| + 2$ _____

Look at the graphs below and determine the equation. Don't worry about the a value. In other words, the answer will not be $f(x) = 3(x + 2)^2 + 4$, but $f(x) = (x + 2)^2 + 4$ (no a value of 3).
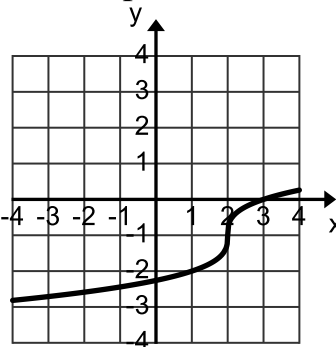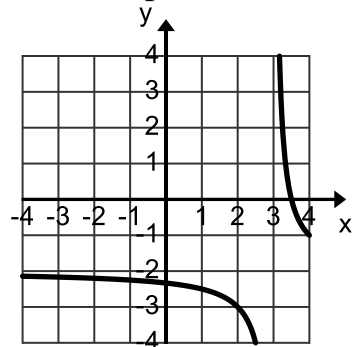
Graph 24

Graph 25

Graph 26

Graph 27

Graph 24: _____

Graph 25: _____

Graph 26: _____

Graph 27: _____