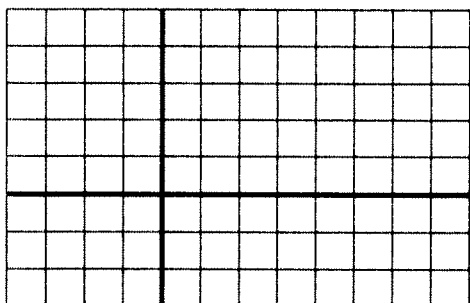
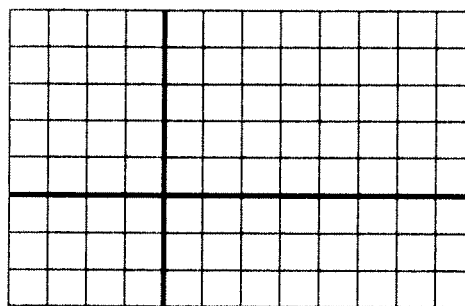


- Complete the following questions from the textbook: p. 70 # 9, 12a, 15. and p. 73 # 16, 19, 20.
- Sketch the following quadratic functions and state all transformations from the graph of $f(x) = x^2$.

$$g(x) = -(x - 5)^2$$

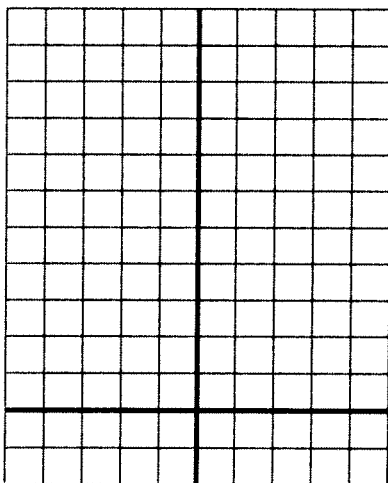


$$h(x) = \frac{1}{2}(x - 3)^2 + 1$$

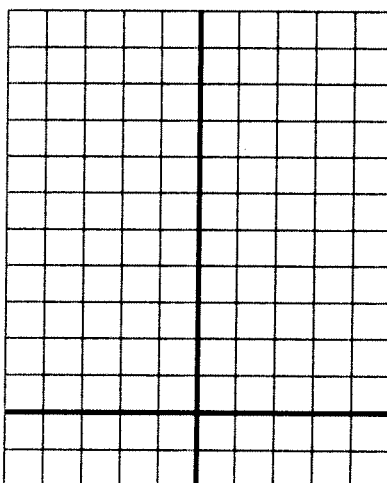


- Graph each of the following functions and state the transformation in each case.

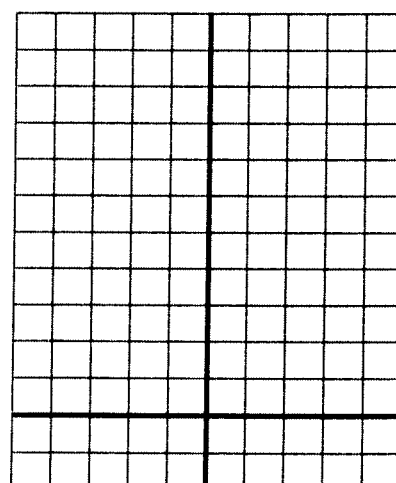
$$f(x) = 7 - x^2$$



$$f(x) = (x - 1)^2$$



$$f(x) = x^2 - 1$$



- Describe how the graph of $g(x) = (3x)^2$ is different from the graph of $h(x) = 3x^2$.

- Write an equation for each function formed from the base graph $f(x) = x^2$ using the given transformations

a) reflected vertically
vertical stretch factor of 4
translated 7 units to the right

b) vertical compression factor of $1/3$
translated 4 units to the left

c) vertical reflection
translated 5 units up

Questions

~~1. $112x^2 - 700$~~

~~2. $12x^2 + 59x + 72$~~

3. $45x^2 - 980$

4. $x^2 - 18x + 77$

5. $x^2 + 5x - 50$

6. $12x^2 + 31x + 7$

7. $4x^2 - 225$

8. $8x^2 + 26x - 45$

9. $7x^2 - 63$

10. $x^2 + 6x - 7$

11. $x^2 - 8x - 48$

~~12. $28x^2 - 1575$~~

13. $x^2 + 7x + 6$

14. $20x^2 - 180$

~~15. $27x^2 - 500$~~

16. $4x^2 - 9$

~~17. $15x^2 - 2x - 15$~~

~~18. $18x^2 - 132$~~

19. $20x^2 - 180$

20. $6x^2 + 7x + 2$

21. $x^2 + 2x + 1$