Name: ______________________ 9/23/11

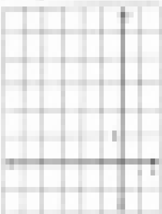
Review - Chapter 2

Evaluate the function for the given value of x.

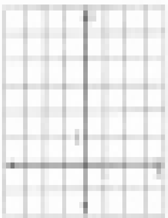
3. $f(x) = 25 - 2x$ when $x = 4$
4. $f(x) = |x - 3|$ when $x = 2$
5. $f(x) = x^2 + 5x + 1$ when $x = 1$

Graph the equation.

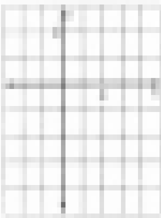
6. $y = \frac{1}{2}x + 3$



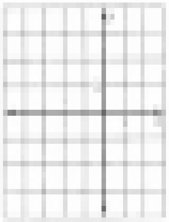
7. $y = 2$



8. $4x - y = 8$



9. $x = -2$

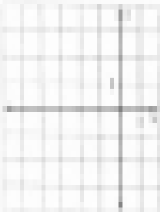


Write an equation of the line that has the given properties.

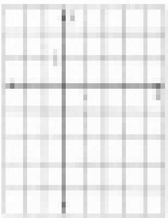
10. slope $\frac{1}{2}$, y-intercept 2
11. slope 1, point $(2, -5)$
12. points $(1, 4), (-1, 0)$

Graph the inequality in a coordinate plane.

13. $x \geq -3$



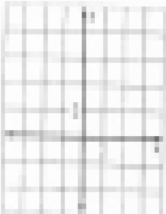
14. $x \leq 2y + 1$



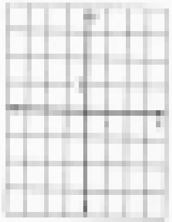
15. **Car Wash** A local car wash charges $8 per wash and $10 per wash and wax. At the end of a certain day, the total sales were $1800. Write a model that shows the different numbers of the two types of car washes. Then find the number of wash and waxes there were if 200 were washes only.

Graph the function.

15. $f(x) = \begin{cases} x, & \text{if } -2 \leq x \leq 2 \\ 2x, & \text{if } x < -2 \\ 3x, & \text{if } x > 2 \end{cases}$



16. $f(x) = \begin{cases} x - 2, & \text{if } x \geq 0 \\ x + 3, & \text{if } x < 0 \end{cases}$



17. The graph of $x + 2y = -3$ contains which point?
    (A) $(0, 0)$ (B) $(-2, -10)$ (C) $(3, -1)$ (D) $(-1, -2)$
18. The slope of a line in the form $y = mx + b$ is
    (A) x (B) y (C) b (D) m
19. The solution of $|x + 2| = 4$ is
    (A) $x = 2$ (B) $x = -6$ (C) $x = 2, -6$ (D) $x = -2, 6$
20. The inequality $-4 \leq x < 4$
    (A) is undefined (B) includes 0 (C) has no solutions (D) excludes 4
21. The points $(0, 2)$, $(2, 2)$, $(3, 4)$, and $(4, 5)$ lie on the line with equation
    (A) $-x + y = 1$ (B) $x - y = 1$ (C) $x + y = 1$ (D) $x + y = -1$
22. Write an equation of the line that has a slope of $\frac{1}{2}$ and a y-intercept of -2.
    (A) $y = -\frac{1}{2}x - 2$ (B) $y = \frac{1}{2}x + 2$ (C) $y = \frac{1}{2}x - 2$ (D) $y = -\frac{1}{2}x + 2$