

Bonus Assignment #1

Date _____

From Assignment #1: Evaluate each function.

1) $g(n) = 2n^2 + 2n$; Find $g(-4)$

2) $p(n) = 4n$; Find $p(3n)$

3) $h(x) = 5^{2x}$; Find $h(x + 3)$

From Assignment #1: Find the inverse of each function.

4) $h(x) = -3x + 3$

From Assignment #1: Perform the indicated operation.

5) $f(x) = x + 3$
 $g(x) = -3x + 2$
Find $f(g(x))$

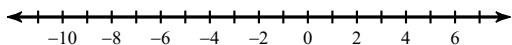
6) $f(x) = x - 1$
 $g(x) = 2x - 2$
Find $(f \cdot g)(-4x)$

From Assignment #2: Solve each equation.

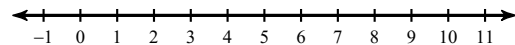
7) $10 + 3|-7 - n| = 19$

From Assignment #2: Solve each inequality and graph its solution.

8) $|b + 2| + 7 > 11$



9) $6|2m - 3| + 3 \leq 9$

**From Assignment #3: Simplify each expression.**

10) $-4(r - 3) - 2(-8r + 5)$

From Assignment #3: Simplify

11) $\frac{7 + 5i}{-3i}$

12) $\frac{3i}{6 + 10i}$

13) $(5 + 5i)(8 + 8i)$

14) $(-2 - 2i) + (7 - 3i)$

From Assignment #3: Find the discriminant of each quadratic equation then state the number and type of solutions.

15) $2m^2 + 4m + 2 = 0$

16) $-9p^2 - 8p - 2 = 7$

From Assignment #3: Divide by factoring, long division or synthetic division.

17) $(r^3 - 4r^2 - 18r - 21) \div (r - 7)$

18) $(18a^2 - 22a - 26) \div (2a - 4)$

From Assignment #3: State if the given binomial is a factor of the given polynomial.

19) $(-10n + 12n^4 + 35n^2 - 28 - 32n^3) \div (3n - 5)$

From Assignment #3: Solve each equation by factoring.

20) $9p^2 - 33p = -24$

From Assignment #3: Solve each equation by taking square roots.

21) $1 - 7n^2 = -83$

From Assignment #3: Solve each equation with the quadratic formula.

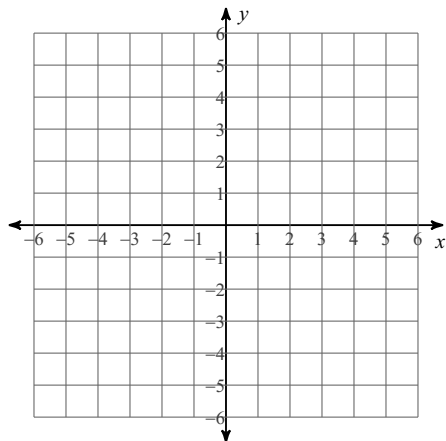
22) $9a^2 - 2 = -8a$

23) $p^2 + 10 = -4p$

From Assignment #4: Graph each equation by transformation.

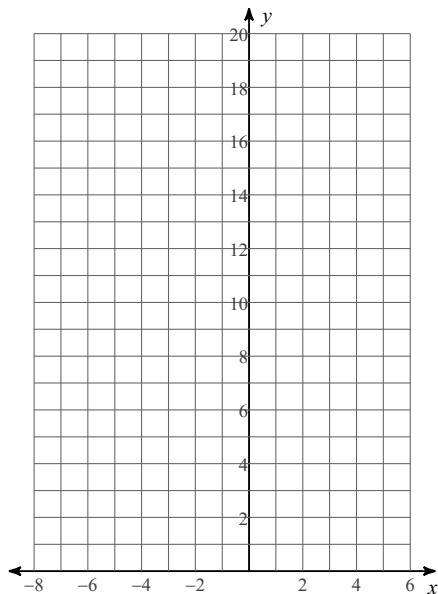
$f(x) = a(x-h)+k$

24) $y = 3|x - 1|$



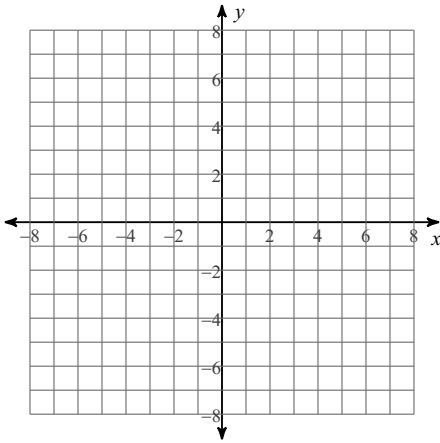
From Assignment #4: Sketch the graph of each function by transformation $f(x) = a(x - h) + k$.

25) $f(x) = 2^{x+1} + 2$



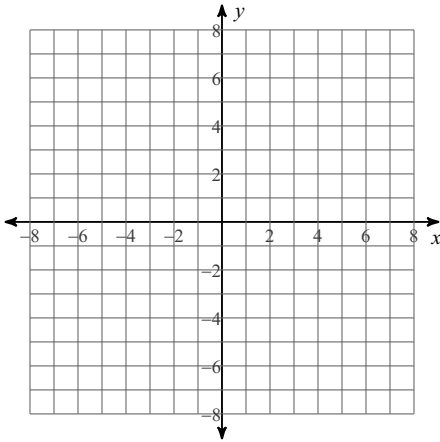
From Assignment #4: Identify the vertex of each. Then sketch the graph.

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



From Assignment #4: Sketch the graph of each function.

27) $y = \sqrt{x - 3}$



From Assignment #4: Identify the domain and range of each.

28) $y = \sqrt{x - 3} + 4$

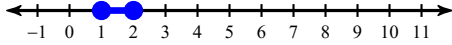
Answers to Bonus Assignment #1 (ID: 1)

1) 24

3) 5^{2x+6}

5) $-3x + 5$

7) $\{-10, -4\}$

9) $1 \leq m \leq 2$: 

11) $\frac{7i - 5}{3}$

13) $80i$

15) 0; one real solution

17) $r^2 + 3r + 3$

19) No

21) $\{2\sqrt{3}, -2\sqrt{3}\}$

23) $\{-2 + i\sqrt{6}, -2 - i\sqrt{6}\}$

25)

27)

