Algebra 2 - Spiral Assignment #4
This assignment is graded based on correct answers. However, there must be work/process shown supporting your answer to receive credit.
Highlight your answers.

Name:_____

Date:_____ **Pd:**____

NO CALCULATOR

1)

The expression $(x+i)^2-(x-i)^2$ is equivalent to

1) 0
2) -2
3) $-2+4xi$
4) $4xi$

2)

Solve for b

$$b-6=\sqrt{18-3b}$$

3)

The width of a rectangular window is 2 feet more than its height. If the area is 35 square feet, what is the height?

F 9 ft
G 7 ft
H 5 ft
J 3 ft

4)

Which number is equivalent to $(32)^{\frac{3}{5}}$?

A 2
B 6
C 8
D 16

5) Simplify completely (assume all variables are positive): $\sqrt[4]{162x^6y^7}$

6) Factor: $8x^2-18xy-5y^2$

7)

Which is equivalent to $(6+\sqrt{7})(5+\sqrt{7})$?

A $11+2\sqrt{7}$

B $30+11\sqrt{7}$

C $30+18\sqrt{7}$

D $37+11\sqrt{7}$

8)

Find the inverse function of $f(x)=\frac{2x+5}{3}$.

9) 10. Which of the following is a factor of the polynomial $64x^3-27y^6$?

A) $4x+3y^2$

B) $4x+12xy-3y^2$

C) $4x-12xy^2+9y^4$

D) $16x^2+12xy^2+9y^4$

10)

Factor the trinomial $36x^2+5x-50$ into the form $(Ax+B)(Cx+D)$, with A, B, C, and D integers, and A and B non-negative. Find the value of A + B + C + D.

A) 8 B) 10 C) 28 D) Prime E) NOTA

11)

If $f(x)=\frac{2}{3}x^2+1$ and $g(x)=6x-15$, which polynomial is equivalent to $g(f(x))$?

A $4x^2-13$

B $4x^2-9$

C $4x^3-10x^2+6x-15$

D $16x^2-80x+101$

12)

Find the vertex of the parabola $f(x)=-4x^2+40x-93$

a.) (5, 7) b.) (4, 10) c.) (- 3, 4) d.) (- 3, -6) e.) (-5, 7)