Algebra 1
Final Exam

krista king
MATH

Algebra 1 Final Exam

This exam is comprehensive over the entire course and includes 12 questions. You have 60 minutes to complete the exam.

The exam is worth 100 points. The 8 multiple choice questions are worth 5 points each (40 points total) and the 4 free response questions are worth 15 points each (60 points total).

Mark your multiple choice answers on this cover page. For the free response questions, show your work and make sure to circle your final answer.

1. (5 pts)	A	B	C	D	E
2. (5 pts)	A	B	C	D	E
3. (5 pts)	A	B	C	D	E
4. (5 pts)	A	B	C	D	E
5. (5 pts)	A	B	C	D	E
6. (5 pts)	A	B	C	D	E
7. (5 pts)	A	B	C	D	E
8. (5 pts)	A	B	C	D	E

1. **(5 pts)** Which property is illustrated by $3(a-1)=3a-3$?

A Commutative property

B Associative property

C Identity property

D Transitive property

E Distributive property

2. **(5 pts)** Evaluate $b^0+3(5a-2b+c^2)-4a\div 2$ when $a=2$, $b=1$, and $c=4$.

A -31

B 0

C 55

D 69

E 81

3. **(5 pts)** Simplify the expression $(8x^2 - 3x) - (6x^2 - 9x + 4)$.

A $2x^2 + 6x + 4$

B $2x^2 + 6x - 4$

C $2x^2 - 12x - 4$

D $2x^2 - 12x + 4$

E $2x^2 - 6x - 4$

4. **(5 pts)** What are two consecutive numbers whose product is 132?

A 11, 12

B 12, 13

C 13, 14

D 14, 15

E 15, 16

5. **(5 pts)** Simplify the expression $(x^3 + 2x^2 + 8) \div (x - 2)$.

A $x^2 + 4x + 8$

B $x^2 + 4x - 8$

C $x^2 + 4x + 8 + \frac{24}{x-2}$

D $x^2 + 4x + 8 + \frac{8}{x-2}$

E $x^2 + 4x + 12$

6. **(5 pts)** What is the GCF of $3a^5b^3 - 18a^3b^3 - 21a^2b^4$?

A $6a^3b^3$

B $7a^5b^4$

C $3ab$

D $3a^2b^3$

E $3a^2b^2$

7. **(5 pts)** Solve $6 - 2x \leq 14$.

A	$x \geq 8$	C	$x \geq -4$	E	$x \leq -8$
B	$x \leq 2$	D	$x \leq -4$		

8. **(5 pts)** Write an expression to represent the product of 10 and the sum of 5 and a number.

A	$10(x+5)$	C	$10x+5$	E	$10(5)+x$
B	$\frac{x+5}{10}$	D	$\frac{10}{x+5}$		

9. **(15 pts)** Graph $y = -3x + 4$.

10. **(15 pts)** Solve $2x^2 + 5x - 6 = 0$ using the quadratic formula.

11. **(15 pts)** Graph the function $f(x) = \sqrt{x - 2}$ and find the function's domain and range.

12. **(15 pts)** Determine whether the function is even, odd, or neither.

$f(x) = x^3 - 3x$