HW 9/11 ALG 2

Answers

1. $x \approx 2.97$

2. $x = -22, y = -5.3\overline{3}$

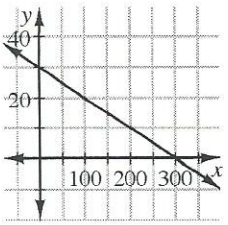
3. $x = \frac{1}{4}, \frac{8}{3}$

4. $x = \pm 4\sqrt{2} \approx 5.64$

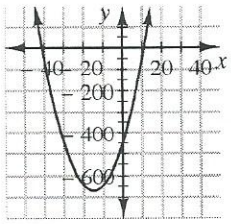
5. 25.8

6. 0.888

7. 2035.8

8. 

This is a line with a slope of –0.1.
x-intercept: (300, 0)
y-intercept: (0, 30)

9. 

This is a parabola opening upward.
x-intercepts: ≈ (–40.88, 0) and (10.88, 0)
y-intercept: (0, –445)
vertex: (–15, –670)
Line of symmetry: $x = -15$

10. The graph of this function is curved. There are no x- or y-intercepts, it is a function, the domain is $x \geq 6$, the range is $y \geq 1$. The "starting point" is (6, 1).

11. This graph is a curve and it has two unconnected parts. It has no x-intercepts, and the y-intercept is $\left(0, -\frac{1}{6}\right)$. The domain is all real values of x except 6, and the range is all real values of y except 0. The line $y = 0$ is a horizontal asymptote, and $x = 6$ is a vertical asymptote. This is a function.

Algebra Name KEY Period____

WHAT HAS FOUR WHEELS AND FLIES?

Simplify. ANSWER KEY

C. $\left(\frac{a^3b^5}{a^2b^7}\right)$ $\left(\frac{a}{b^2}\right)$	G. $\left(\frac{a^{12}b^2c}{a^{14}b^3c^{-2}}\right)^{-3}$ $\left(\frac{a^6b^3}{c^9}\right)$	U. $\left(\frac{a^2b^2}{ab^4}\right)^{-3}$ $\left(\frac{b^6}{a^3}\right)$
R. $\left(\frac{a^{-3}b^{-2}}{ab^{-6}}\right)^2$ $\left(\frac{b^8}{a^8}\right)$	B. $\left(\frac{a^3b^2}{ab^6}\right)^{-2}$ $\left(\frac{b^8}{a^4}\right)$	A. $\left(\frac{a^3b^8c}{a^7b^5c}\right)^3$ $\left(\frac{b^9}{a^{12}}\right)$
E. $\left(\frac{a^{-3}b^{-2}}{a^3b^{-4}}\right)$ $\left(\frac{b^2}{a^6}\right)$	R. $\left(\frac{a^{-3}b^{-2}c}{a^3b^{-4}c^0}\right)^{-1}$ $\left(\frac{a^6}{b^2c}\right)$	K. $\left(\frac{a^{-1}b^8c^{-2}}{a^7b^{-3}c}\right)^{-2}$ $\left(\frac{a^{16}c^6}{b^{22}}\right)$
T. $\left(\frac{a^4b^8c^{-1}}{a^7b^2c}\right)^3$ $\left(\frac{b^{18}}{a^9c^6}\right)$	A. $\left(\frac{a^{-1}b^0}{a^{-3}b}\right)^2$ $\left(\frac{a^4}{b^2}\right)$	G. $\left(\frac{a^{-1}b^8}{a^4b^{-2}}\right)^4$ $\left(\frac{b^{40}}{a^{20}}\right)$

A	G	A	R	B	A	G	E
$\left(\frac{b^9}{a^{12}}\right)$	$\left(\frac{a^6b^3}{c^9}\right)$	$\left(\frac{a^4}{b^2}\right)$	$\left(\frac{b^8}{a^8}\right)$	$\left(\frac{b^8}{a^4}\right)$	$\left(\frac{b^9}{a^{12}}\right)$	$\left(\frac{b^{40}}{a^{20}}\right)$	$\left(\frac{b^2}{a^6}\right)$

T	R	U	C	K
$\left(\frac{b^{18}}{a^9c^6}\right)$	$\left(\frac{a^6}{b^2c}\right)$	$\left(\frac{b^6}{a^3}\right)$	$\left(\frac{a}{b^2}\right)$	$\left(\frac{a^{16}c^6}{b^{22}}\right)$

Algebra Name KEY Period

FACTORING TRINOMIALS

Factor each trinomial. Match each answer with its corresponding letter in blanks below.

ANSWER KEY

D. $x^2 - 3n + 2$ $(x - 2)(x - 1)$	I. $x^2 - 14x + 40$ $(x - 10)(x - 4)$	O. $y^2 - 8y + 12$ $(y - 6)(y - 2)$	C. $n^2 - 10n + 21$ $(n - 7)(n - 3)$	K. $x^2 - 5x + 6$ $(x - 3)(x - 2)$
Z. $y^2 - 6y + 5$ $(y - 5)(y - 1)$	C. $b^2 - 2b + 1$ $(b - 1)(b - 1)$	L. $x^2 - 8x + 16$ $(x - 4)(x - 4)$	R. $x^2 - 13x + 30$ $(x - 10)(x - 3)$	E. $n^2 - 15n + 26$ $(n - 13)(n - 2)$
E. $a^2 - 9a + 14$ $(a - 7)(a - 2)$	I. $y^2 - 11y + 28$ $(y - 7)(y - 4)$	F. $x^2 - 8x + 15$ $(x - 5)(x - 3)$	U. $x^2 - 14x + 49$ $(x - 7)(x - 7)$	P. $a^2 - 4a + 4$ $(a - 2)(a - 2)$
R. $y^2 - 15y + 36$ $(y - 12)(y - 3)$	M. $n^2 - 11n + 18$ $(n - 9)(n - 2)$	S. $n^2 - 11n + 24$ $(n - 8)(n - 3)$	T. $n^2 - 18n + 32$ $(n - 16)(n - 2)$	H. $x^2 - 12x + 27$ $(x - 9)(x - 3)$
L. $y^2 - 11y + 30$ $(y - 6)(y - 5)$	P. $a^2 - 20a + 36$ $(a - 18)(a - 2)$	B. $a^2 - 14r + 33$ $(a - 11)(a - 3)$	N. $a^2 - 12a + 36$ $(a - 6)(a - 6)$	B. $x^2 - 52x + 100$ $(x - 50)(x - 2)$
N. $x^2 - 7x + 12$ $(x - 4)(x - 3)$	Q. $x^2 - 13x + 40$ $(x - 8)(x - 5)$	B. $n^2 - 30n + 200$ $(n - 20)(n - 10)$	C. $x^2 - 14x + 45$ $(x - 9)(x - 5)$	O. $x^2 - 11x + 28$ $(x - 7)(x - 4)$

What did one plate say to the other?

D	**I**	**N**	**N**	**E**	**R**	**'**	**S**
$(x - 2)(x - 1)$	$(y - 7)(y - 4)$	$(a - 6)(a - 6)$	$(x - 4)(x - 3)$	$(n - 13)(n - 2)$	$(y - 12)(y - 3)$		$(n - 8)(n - 3)$

O	**N**	**M**	**E**	**.**
$(y - 6)(y - 2)$	$(x - 4)(x - 3)$	$(n - 9)(n - 2)$	$(n - 13)(n - 2)$	

What did the chicken say to Arnold Schwarzenegger?

I	**'**	**L**	**L**	**B**	**E**
$(y - 7)(y - 4)$		$(y - 6)(y - 5)$	$(x - 4)(x - 4)$	$(x - 50)(x - 2)$	$(n - 13)(n - 2)$

B	**O**	**C**	**K**	**.**	**.**	**.**
$(n - 20)(n - 10)$	$(x - 7)(x - 4)$	$(b - 1)(b - 1)$	$(x - 3)(x - 2)$			

B	**O**	**C**	**K**	**,**	**B**	**O**	**C**	**K**	**.**
$(a - 11)(a - 3)$	$(y - 6)(y - 2)$	$(x - 9)(x - 5)$	$(x - 3)(x - 2)$		$(a - 11)(a - 3)$	$(x - 7)(x - 4)$	$(n - 7)(n - 3)$	$(x - 3)(x - 2)$	

Why did the student bring his father to class?

F	**O**	**R**	**T**	**H**	**E**
$(x - 5)(x - 3)$	$(y - 6)(y - 2)$	$(x - 10)(x - 3)$	$(n - 16)(n - 2)$	$(x - 9)(x - 3)$	$(a - 7)(a - 2)$

P	**O**	**P**	**Q**	**U**	**I**	**Z**	**.**
$(a - 2)(a - 2)$	$(x - 7)(x - 4)$	$(a - 18)(a - 2)$	$(x - 8)(x - 5)$	$(x - 7)(x - 7)$	$(x - 10)(x - 4)$	$(y - 5)(y - 1)$	