Bellwork Alg 2 Wednesday, September 19, 2018

Factor each completely.

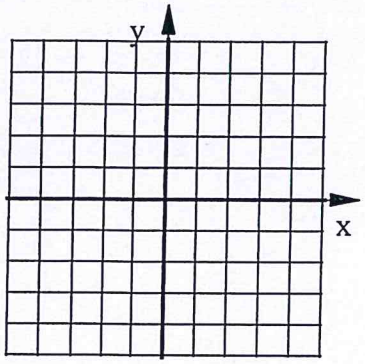
1. $288x^{13} + 40x^7 - 8x$

2. $27P^6Q - 48P^2Q^3$

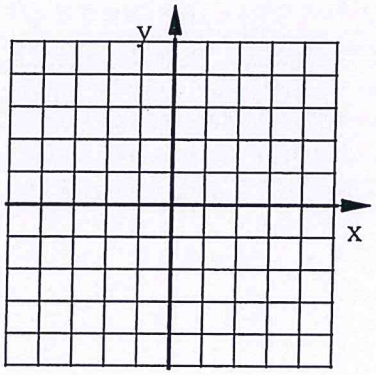
3. $600w^5 + 250w^4 - 96w^3 - 40w^2$

Graph each quadratic using at least five points.

4. $y = (x+3)^2 - 2$

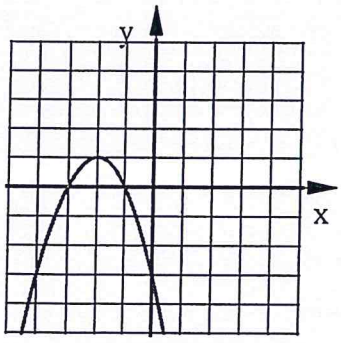


5. $y = -(x-1)^2 + 5$

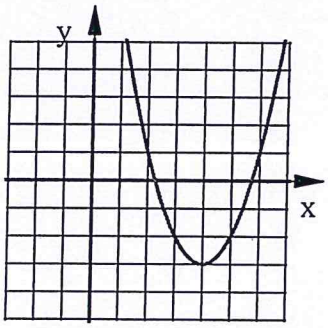


Write the equation of each quadratic graph.

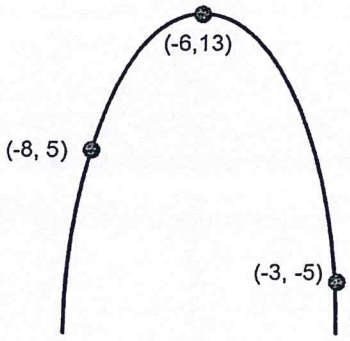
6.



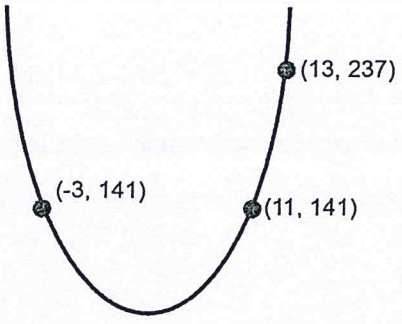
7.



8. State the coordinates of two other points on this parabola.



9. State the equation of the LOS of this parabola.



Bellwork Alg 2 Wednesday, September 19, 2018

ANSWERS

Factor each completely.

1. $288x^{13} + 40x^7 - 8x$

$= 8x(36x^{12} + 5x^6 - 1)$

-36	$+9$
-4	$+5$

	$4x^6$	$+1$
$9x^6$	$36x^{12}$	$+9x^6$
-1	$-4x^6$	-1

$= 8x(4x^6+1)(9x^6-1) = 8x(4x^6+1)(3x^3 \pm 1)$

2. $27P^6Q - 48P^2Q^3$

$= 3p^2q(9p^4 - 16q^2)$

$= 3p^2q(3p^2 \pm 4q)$

3. $600w^5 + 250w^4 - 96w^3 - 40w^2$

$= 2w^2(300w^3 + 125w^2 - 48w -$

	$12w$	$+5$
$25w^2$	$300w^3$	$+125w^2$
-4	$-48w$	-20

$= 2w^2(12w+5)(25w^2-4)$

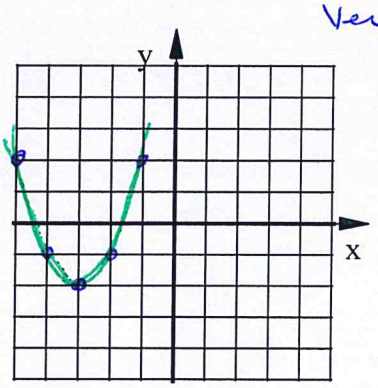
$= 2w^2(12w+5)(5w \pm 2)$

Graph each quadratic using at least five points.

4. $y = (x+3)^2 - 2$

3 left 2 down

Vertex $(-3,-2)$

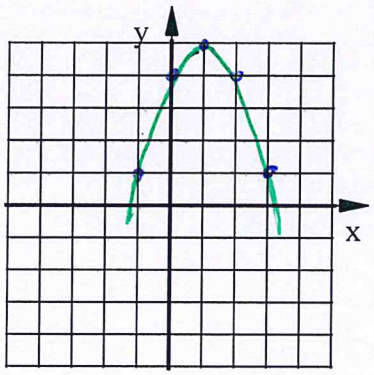


5. $y = -(x-1)^2 + 5$

1 right 5 up

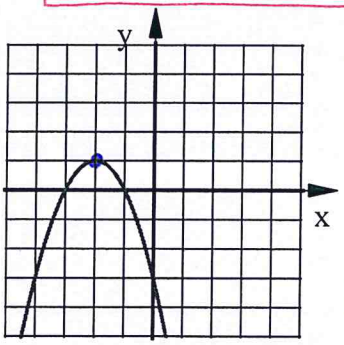
opens down

Vertex $(1,5)$



Write the equation of each quadratic graph.

6. $y = -(x+2)^2 + 1$



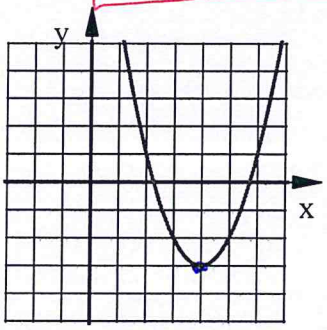
Vertex $(-2,1)$

2 left 1 up

opens down

same shape as parent function

7. $y = (x-4)^2 - 3$



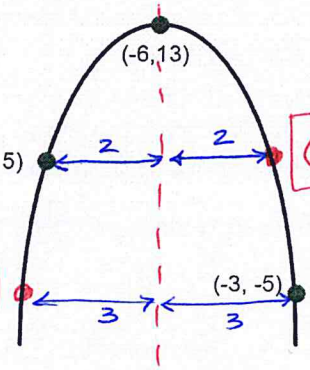
Vertex $(4,-3)$

4 RT 3 down

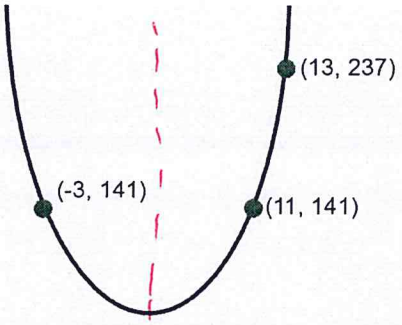
opens up

same shape as parent function

8. State the coordinates of two other points on this parabola.



9. State the equation of the LOS of this parabola.



$X = \frac{-3+11}{2} = \frac{8}{2}$

$X = 4$