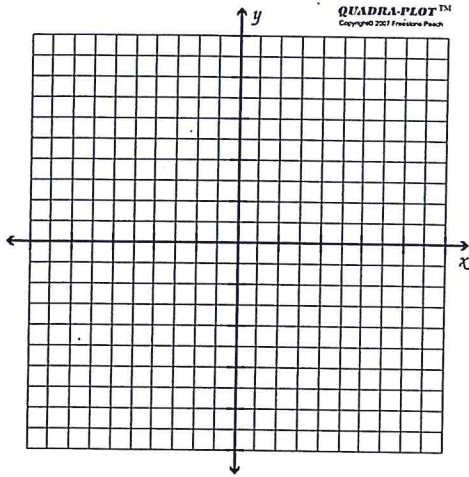


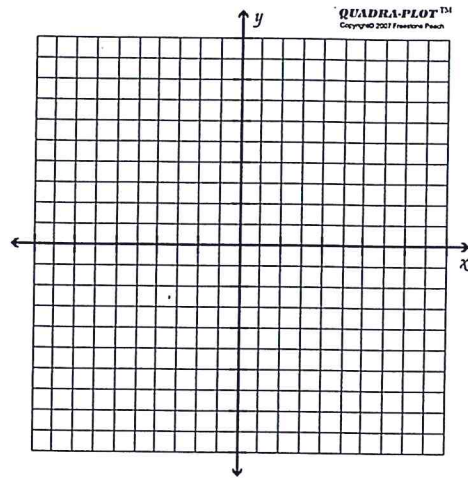
## Factoring &amp; Graphing

Sketch the graph of each function.

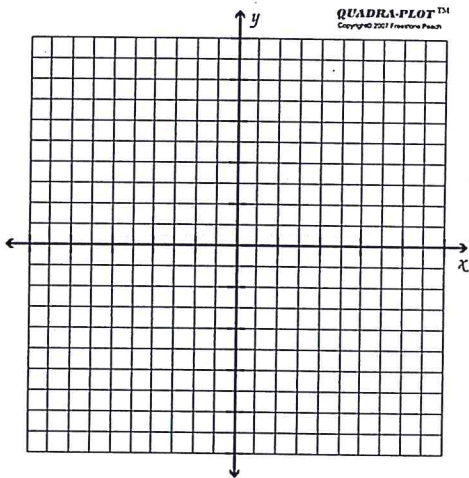
1)  $y = -(x - 1)^2 + 1$



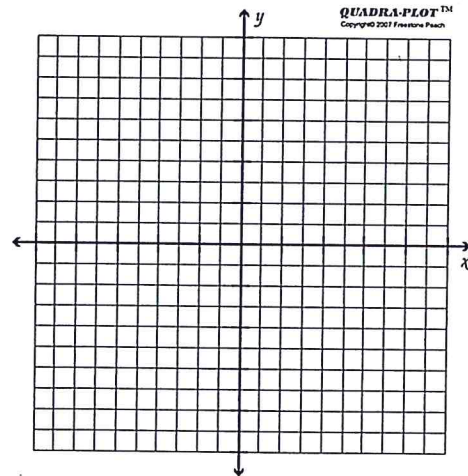
2)  $y = 2(x - 2)^2 + 2$



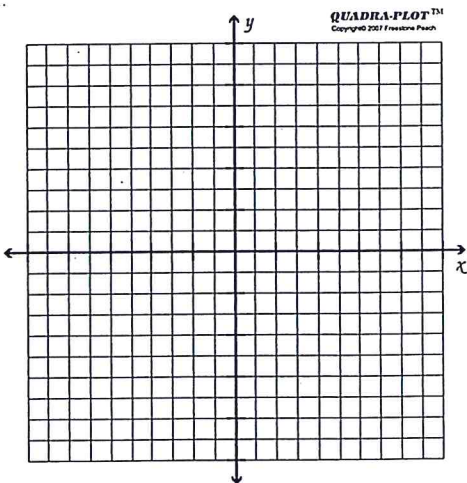
3)  $y = -\frac{1}{2}(x + 4)^2 + 3$



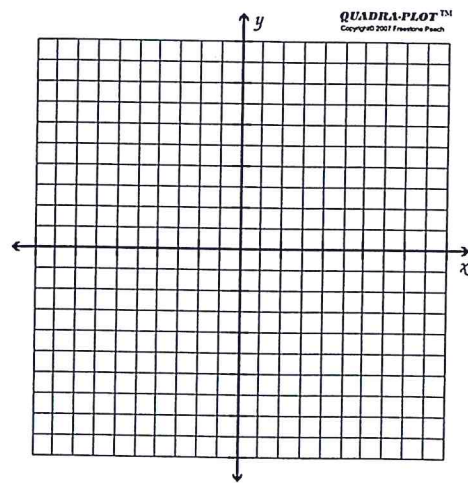
4)  $y = (x + 2)^2 - 1$



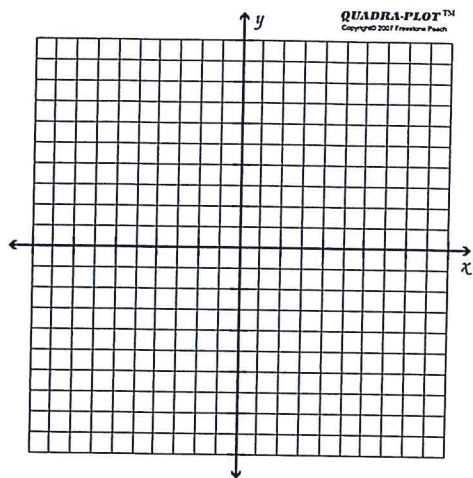
5)  $y = x^2 - 6x + 6$



6)  $y = -2x^2 + 12x - 14$



7)  $y = -x^2 + 2x$



Factor each completely.

9)  $v^3 + 9v^2 + 14v$

11)  $6k^2 - 36k - 42$

13)  $3b^2 - 9b - 54$

15)  $4x^2 + 24x$

17)  $v^3 - 18v^2 + 81v$

19)  $x^2 + 4x - 45$

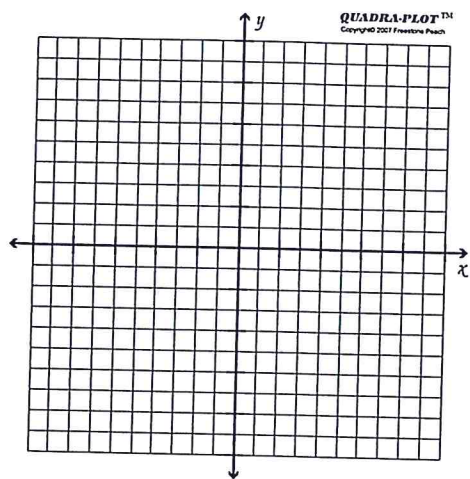
21)  $2n^2 + 14n - 16$

23)  $2n^2 - 10n + 12$

25)  $p^2 + 4p + 24$

27)  $x^2k + 4xk - 45k$

8)  $y = \frac{1}{2}x^2 - 4x + 9$



10)  $x^2 - 6x + 8$

12)  $6n^2v - 36nv - 240v$

14)  $r^2 - 3r$

16)  $n^2 + n - 56$

18)  $x^2 - 14x + 40$

20)  $5n^3 + 15n^2$

22)  $a^2 - 7a + 56$

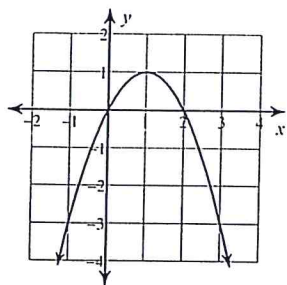
24)  $p^2 - 20p + 100$

26)  $5x^2 - 40x + 35$

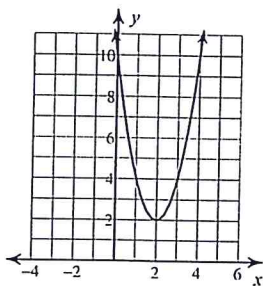
28)  $4x^2 + 40x + 36$

# Answers to Factoring & Graphing

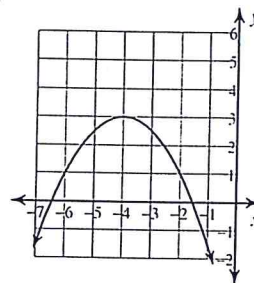
1)



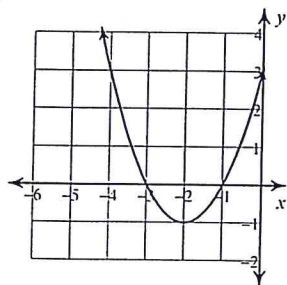
2)



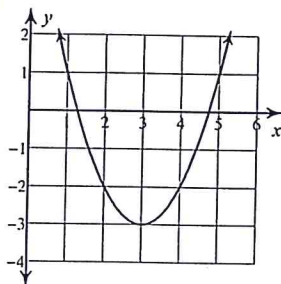
3)



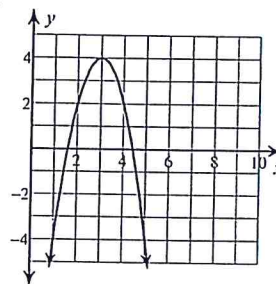
4)



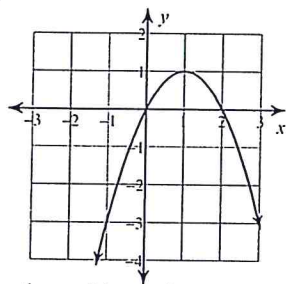
5)



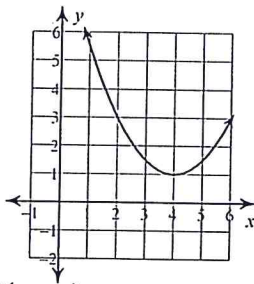
6)



7)



8)



9)  $v(v+7)(v+2)$

10)  $(x-4)(x-2)$

11)  $6(k+1)(k-7)$

12)  $6v(n+4)(n-10)$

13)  $3(b-6)(b+3)$

14)  $r(r-3)$

15)  $4x(x+6)$

16)  $(n-7)(n+8)$

17)  $v(v-9)^2$

18)  $(x-10)(x-4)$

19)  $(x+9)(x-5)$

20)  $5n^2(n+3)$

21)  $2(n+8)(n-1)$

22) Not factorable

23)  $2(n-2)(n-3)$

24)  $(p-10)^2$

25) Not factorable

26)  $5(x-1)(x-7)$

27)  $k(x-5)(x+9)$

28)  $4(x+1)(x+9)$