Graph Matching Activity 4

Factored form (Intercept form)

F1 $y = (x-3)(x-3)$	F2 $y = (x+2)(x+4)$	F3 $y = (x+1)(3-x)$
F4 $y = (x-2)(6-x)$	F5 $y = (x-4)(x+2)$	F6 $y = (x-4)(x-6)$

Standard form (General form)

S1 $y = -x^2 + 2x + 3$	S2 $y = x^2 + 6x + 8$	S3 $y = x^2 - 6x + 9$
S4 $y = x^2 - 10x + 24$	S5 $y = x^2 - 2x - 8$	S6 $y = -x^2 + 8x - 12$

Vertex form (Completed the square form)

V1 $y = (x-5)^2 - 1$	V2 $y = -(x-4)^2 + 4$	V3 $y = (x-1)^2 - 9$
V4 $y = -(x-1)^2 + 4$	V5 $y = (x+3)^2 - 1$	V6 $y = (x-3)^2$

Local Max/Min

M1 **Local max at (1,4)**	M2 **Local min at (5,-1)**	M3 **Local min at (1,-9)**
M4 **Local min at (-3,-1)**	M5 **Local max at (4,4)**	M6 **Local min at (3,0)**

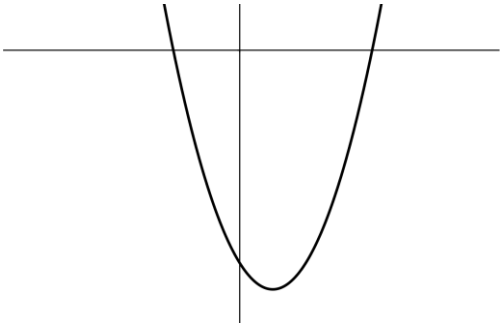
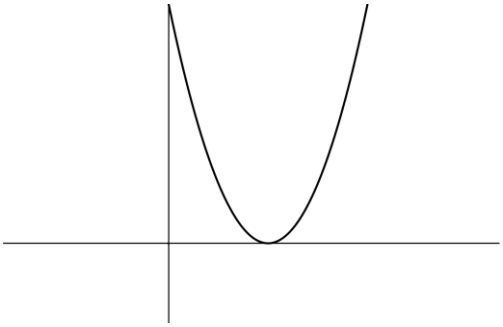
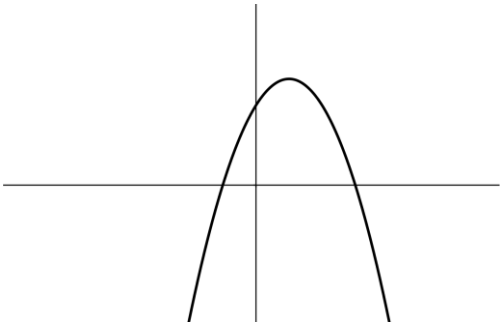
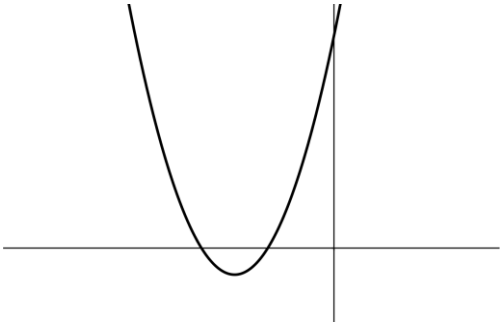
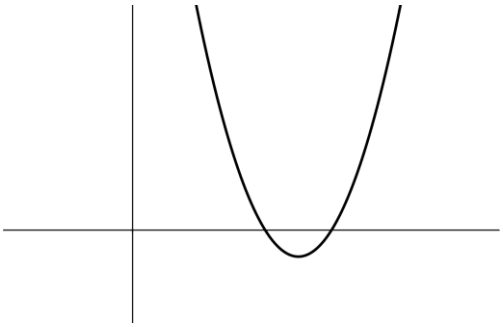
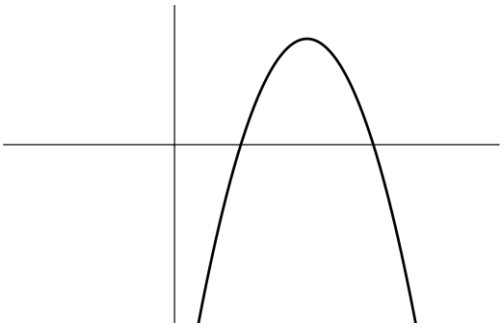
y intercept

Y1 $x = 0, y = 9$	Y2 $x = 0, y = 8$	Y3 $x = 0, y = -8$
Y4 $x = 0, y = -12$	Y5 $x = 0, y = 3$	Y6 $x = 0, y = 24$

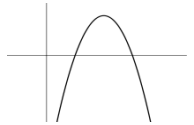
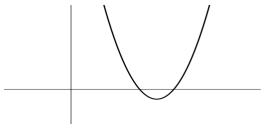
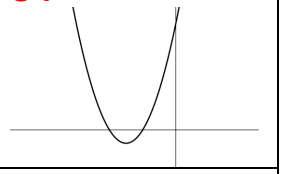
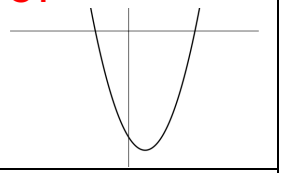
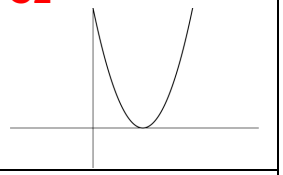
Roots

R1 $y = 0$ $x = -1 \ or \ 3$	R2 $y = 0$ $x = -2 \ or \ 4$	R3 $y = 0$ $x = 2 \ or \ 6$
R4 $y = 0$ $x = 4 \ or \ 6$	R5 $y = 0$ $x = 3$	R6 $y = 0$ $x = -2 \ or \ -4$

Graphs

G1 	G2 
G3 	G4 
G5 	G6 

Graph Matching Activity 4 Solutions

F	S	V	M	Y	R	G
F4 $y = (x-2)(6-x)$	S6 $y = -x^2 + 8x - 12$	V2 $y = -(x-4)^2 + 4$	M5 Local max at (4,4)	Y4 $x = 0$, $y = -12$	R3 $y = 0$ $x = 2 \text{ or } 6$	G6 
F6 $y = (x-4)(x-6)$	S4 $y = x^2 - 10x + 24$	V1 $y = (x-5)^2 - 1$	M2 Local min at (5,-1)	Y6 $x = 0$, $y = 24$	R4 $y = 0$ $x = 4 \text{ or } 6$	G5 
F2 $y = (x+2)(x+4)$	S2 $y = x^2 + 6x + 8$	V5 $y = (x+3)^2 - 1$	M4 Local min At (-3,-1)	Y2 $x = 0$, $y = 8$	R6 $y = 0$ $x = -2 \text{ or } -4$	G4 
F5 $y = (x-4)(x+2)$	S5 $y = x^2 - 2x - 8$	V3 $y = (x-1)^2 - 9$	M3 Local min at (1,-9)	Y3 $x = 0$, $y = -8$	R2 $y = 0$ $x = -2 \text{ or } 4$	G1 
F1 $y = (x-3)(x-3)$	S3 $y = x^2 - 6x + 9$	V6 $y = (x-3)^2$	M6 Local min at (3,0)	Y1 $x = 0$ $y = 9$	R5 $y = 0$ $x = 3$	G2 
F3 $y = (x+1)(3-x)$	S1 $y = -x^2 + 2x + 3$	V4 $y = -(x-1)^2 + 4$	M1 Local max at (1,4)	Y5 $x = 0$, $y = 3$	R1 $y = 0$ $x = -1 \text{ or } 3$	G3