

I: Match each of the following quadratic functions with their graph

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

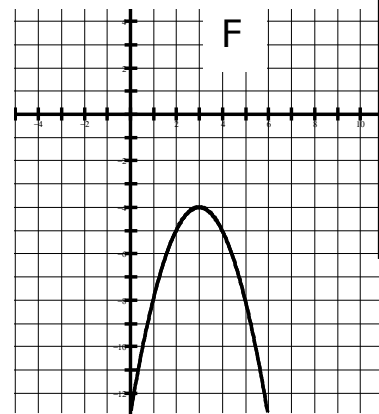
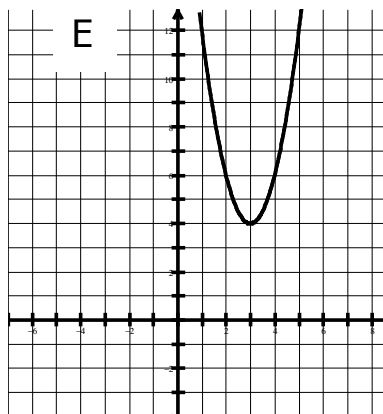
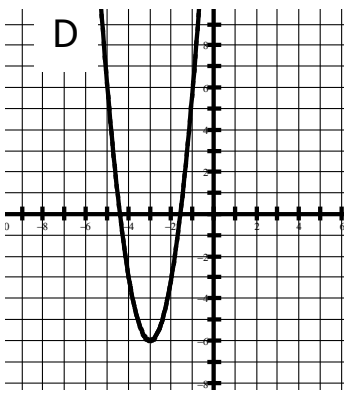
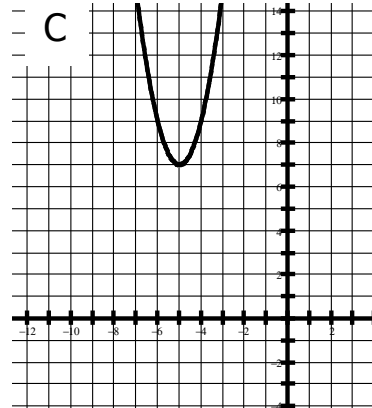
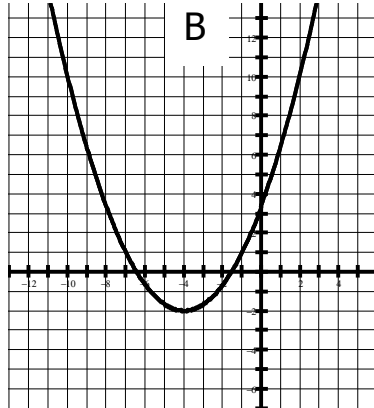
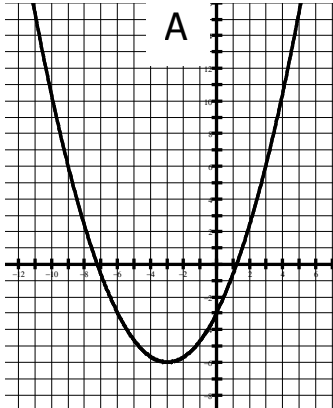
2. $\frac{1}{2}(y - 4) = (x - 3)^2$

3. $y = 2(x + 5)^2 + 7$

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

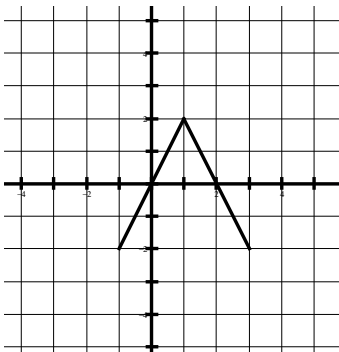
5. $y = \frac{1}{3}(x + 3)^2 - 6$

6. $y = 3x^2 + 18x + 21$

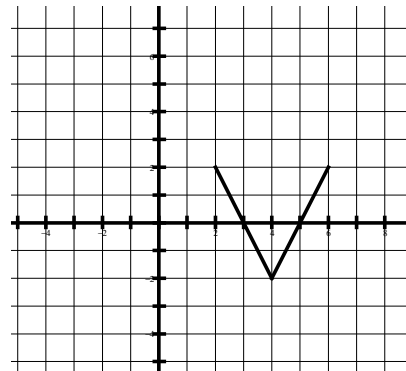


1. F 2. E 3. C 4. B 5. A 6. D

II: For each of the following write the function statement



$y = -2|x - 1| + 2$



$y = 2|x - 4| - 2$

III: State the following functions in mapping notation

i) $3y = x^2$

(x,y) →

(x; $\frac{1}{3}y$)

ii) $-\frac{1}{5}y = x^2$

(x,y) →

(x; -5y)

iii) $4(y + 2) = x^2$

(x,y) →

(x; $\frac{1}{4}y - 2$)

iv) $y - 7 = (x - 3)^2$

(x,y) →

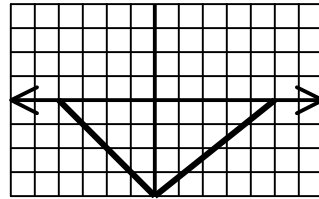
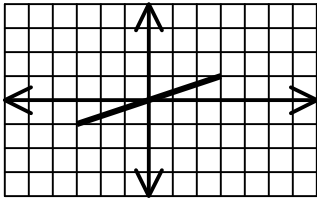
(x + 3; y + 7)

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

(x,y) →

(x - 4; $\frac{1}{2}y - 1$)

IV: State the domain and range for each of the following



Domain {

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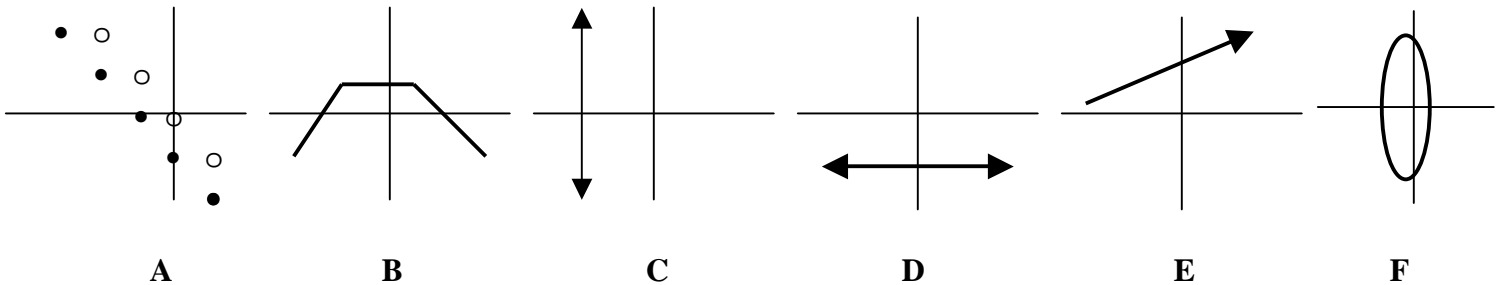
Range {

Range {

$\{ x \mid -3 \leq x \leq 3 ; x \in \mathbb{R} \}$
$\{ y \mid -1 \leq y \leq 1 ; y \in \mathbb{R} \}$

$\{ x \mid -4 \leq x \leq 5 ; x \in \mathbb{R} \}$
$\{ y \mid -4 \leq y \leq 0 ; y \in \mathbb{R} \}$

V: State which of the following graphs represent functions



A, B, D, E

VI: Solve the following quadratic word problems

A rabbit enclosure confines the rabbits to an area of 8736 m^2 . The width is 20 m less than the length. What are the dimensions of the enclosure.

84 m by 104 m

The sum of the squares of 3 consecutive, positive numbers is 869. Find the numbers.

16, 17, 18