

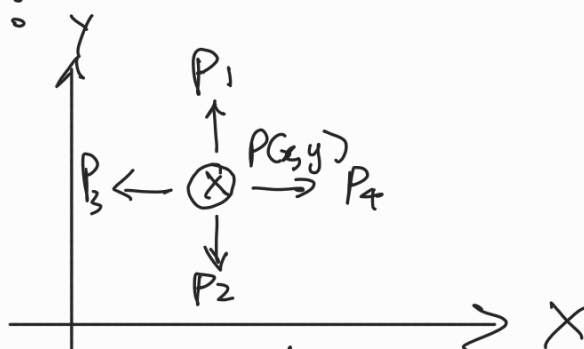
17 More about Graphs of Functions

Review Transformation of Coordinates of Points

Translation

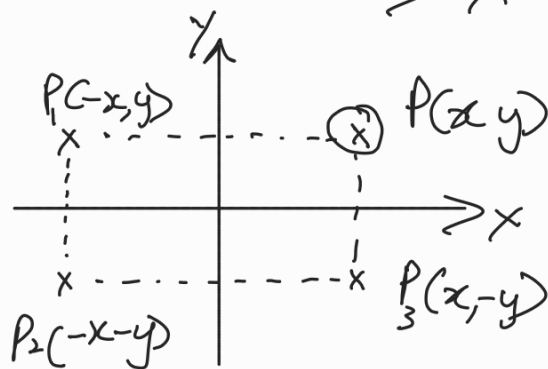
For $k > 0$, $P(x, y)$ is translated to :

- (a) $P_1(x, y+k)$ $\uparrow$ by k
- (b) $P_2(x, y-k)$ $\downarrow$ by k
- (c) $P_3(x-k, y)$ $\leftarrow$ by k
- (d) $P_4(x+k, y)$ $\rightarrow$ by k

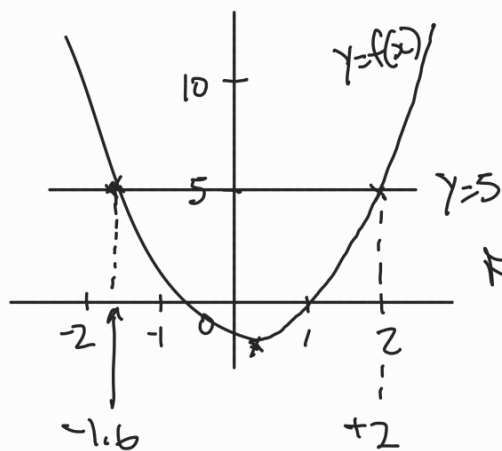


Reflection

- (a) $(-x, y)$ P is reflected y axis
- (b) $(x, -y)$ P is reflected x axis



Solving Equations by Graphical Method



Step 1 draw $y=k$ and $y=f(x)$

Step 2 find the intersections

Step 3 Answers = intersections

Example: $y = 2x^2 - x - 2$

$$y = 5$$

Answer: $(+2, 5)$

(x, y) $(-1.6, 5)$