



Objective: Analyzing Intersections of Functions on Graphs

Homework FI-5 – NYA p.376 #13, 14, 24, 33

Do Now: An athlete alternates between running and walking for a workout. Sketch a graph representing this. Label the y-axis.



Exam Prep: The graph represents the height of a rocket. Which is true about the graph?

- A) It is increasing. C) It is linear.
 B) It is decreasing. D) It is non-linear



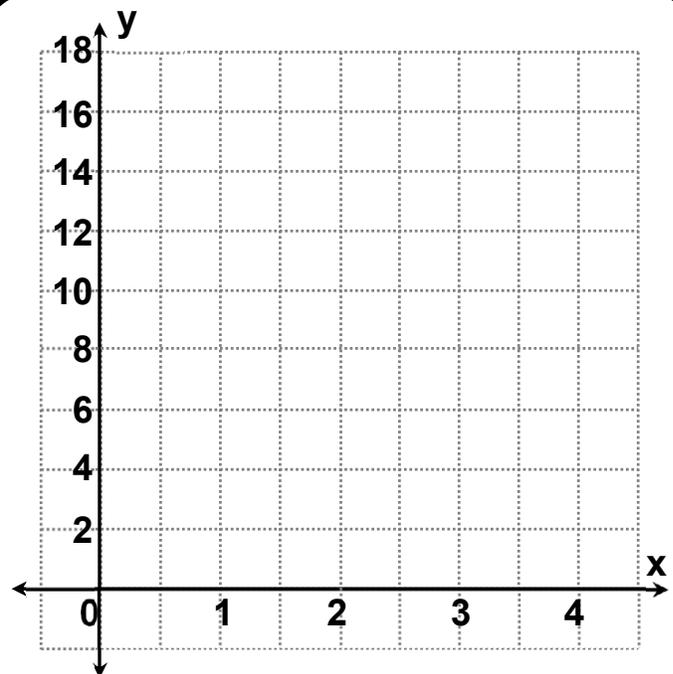
Graph and Analyze

Two fertilizers are being tested.

- Plant A is 4 cm tall and grows at a rate of 4 cm/day.
- Plant B is 10 cm tall and grows at 2 cm/day.

1. Graph the lines.
2. Find their intersection. (,)
3. What does the point signify?

4. Which fertilizer is better?



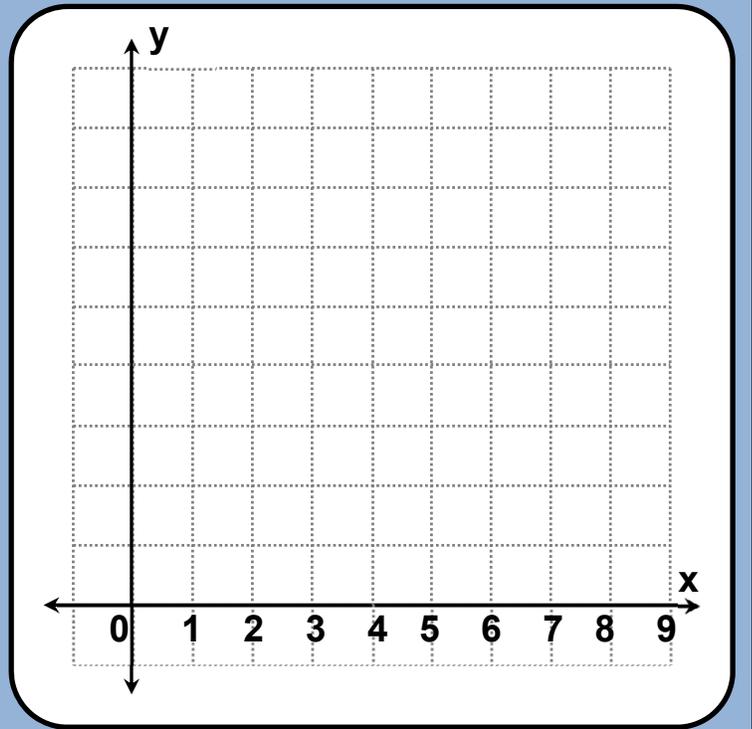
Two Similar Problems

Two football players start at opposite ends of the field, each 10 yds. from the goal line.

- They run at each other at equal rates of 10 yds. / sec.

Graph this situation.

1. Where and when do they meet?
2. Compare the slopes of the lines.

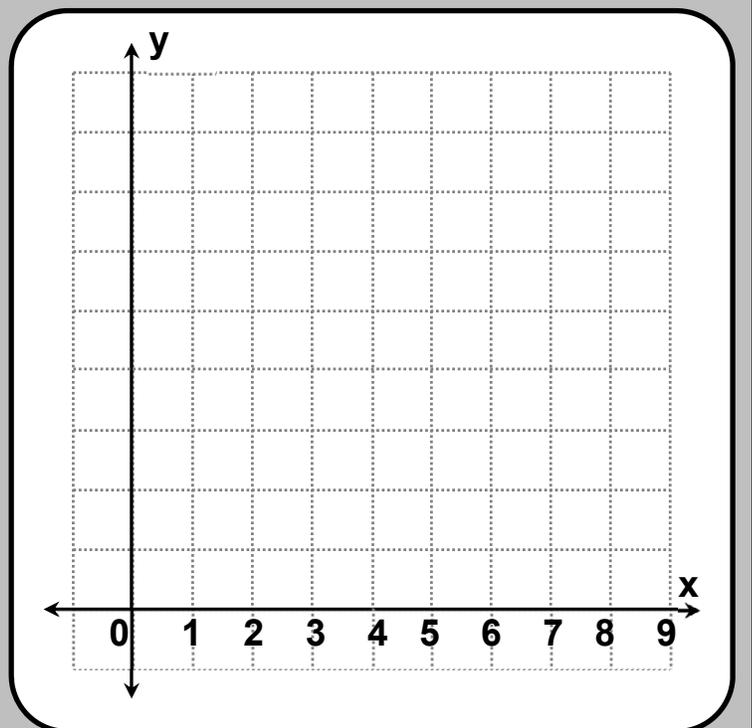


Two football players start at opposite ends of the field, each 10 yds. from the goal line.

- Bo runs at 30 yds / 2 sec.
- Marcus runs at 10 / 2 sec.

Graph this situation.

1. Where and when do they meet?
2. Compare the slopes of the lines.



No Graph Practice

Visualize the following situation comparing two health club memberships. Sketch the graph if necessary to answer the questions.

- The Doctor's Ripped Abstravaganza charges a life-time fee of \$3600.
- The Cat's Zumba House of Pain charges a registration fee of \$1500, plus \$50 a month.

1. Which club membership plan is better?
2. Is there a time when the plans are equal? If yes, when?
3. What do the slopes of each line look like if they were graphed?



Quick Wrap-Up Question

1. What is the meaning of a graph with two lines that never intersect?
2. Change the fertilizer question to match this situation.