

A possible sequence for presenting student work

Phase	Possible Sequencing of Student Work	Rationale and Mathematical Ideas	Possible Questions and Student Responses
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">ANALYZE DISCUSS PRESENT</p>	<ul style="list-style-type: none"> Add a group's graph to the discussion – one that has correct scales. Reflect on the systematic nature of the tables. 	<p>This lesson will lay the foundation for the ideas of linear functions, slope and y-intercept, which will be developed in future lessons. By linking this to the graph students will see a visual representation, and will come to understand why it is called "LINEAR".</p> <p>It is important to make explicit the need to organize data in a systematic way so that patterns become apparent.</p>	<ul style="list-style-type: none"> What patterns do you see in this graph? <ul style="list-style-type: none"> The points are all in a straight line. The points go up by the same amounts. Will the patterns in the tables and the graph always continue that way? Why? <ul style="list-style-type: none"> The cost will keep going up the same way since the shirts will cost \$8 each no matter how many you buy. Our points will keep going up by the same amount since shirts always cost the same. Sometimes they give a discount if you buy a lot. If you buy more than 1000 they'll only charge you \$5 going that way. That would make a great problem to work on later, Maria. Let's remember that one – put it in our parking lot and call it "Maria's T-Shirts". We call this type of relationship a LINEAR RELATIONSHIP. What do you think LINEAR means? <ul style="list-style-type: none"> Is it because it makes a straight line? The points are all lined up? Some of you started your tables out maybe 1, 2, 3, 5, 10, 20, 50. Would you have found a pattern like they did? <ul style="list-style-type: none"> No, because we didn't go up by the same amount at first. Later we changed our table and counted by 10s. It made it easier because when we saw the pattern we just started adding 80 each time – we didn't have to keep on calculating the cost of the shirts. If you took your design in for them to work on but didn't order any shirts yet, how much would ZERO shirts cost? Why? Where do (would) you show that in your table? <ul style="list-style-type: none"> I would still have to pay \$15 for the one-time fee. I would have to put zero shirts at the top of my table. There's still a pattern.

Possible questions and student responses

Mathematical ideas and rationale