

Dylan Scordellis 10/31/2019

Cost Calculations/Graph Homework

- First you will complete the table below. Please see the HINTS below and suggestions for ways to check your work before you start to graph.
- Second, you will complete the graphical activity. Instructions are on page 2 of this document. Look for any additional instructions in Announcements or the Assignment in Canvas.

COST CALCULATIONS:

The following table illustrates the total cost involved in the production of good X. Complete the following table. Then complete the graphical activity below. Refer to the bottom of this page and the next page for helpful hints.

Quantity	Total Cost	Fixed Cost	Var. Cost	Marg. Cost	ATC	AVC	AFC
0	\$ 9,000	9,000	0	Undefined	undefined	und.	—
1	\$15,000	9,000	6,000	6,000	15,000	6,000	9,000
2	\$19,000	9,000	10,000	4,000	9,500	5,000	4,500
3	\$22,000	9,000	13,000	3,000	7,333.33	4,333.33	3,000
4	\$24,000	9,000	15,000	2,000	6,000	3,750	2,250
5	\$29,000	9,000	20,000	5,000	5,800	4,000	1,800
6	\$37,000	9,000	28,000	8,000	6,166.67	4,666.67	1,500
7	\$47,000	9,000	38,000	10,000	6,714.29	5,428.57	1,285.71
8	\$60,000	9,000	51,000	13,000	7,500	6,375	1,125
9	\$76,000	9,000	67,000	16,000	8,444.44	7,444.44	1,000
10	\$96,000	9,000	87,000	20,000	9,600	8,700	900

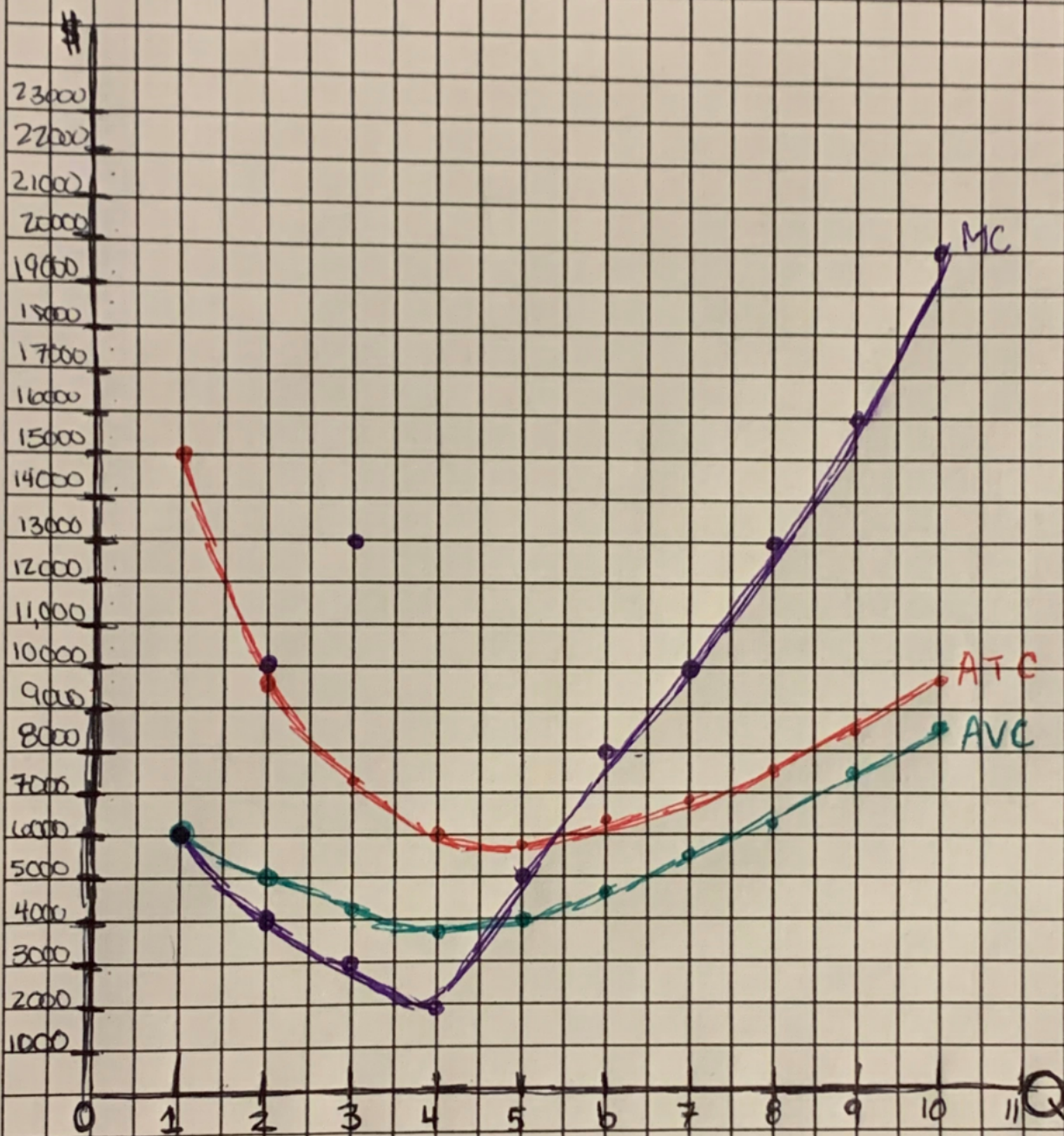
HINTS FOR GETTING STARTED:

- To get started...remember what we know about VC when $Q=0$. Enter that number FIRST!
- What do we know about marginal cost when Q is not changing? What will we put on the table for Marginal Cost at $Q=0$? (Is it ZERO or is it UNDEFINED?)
- For ATC, AVC, And AFC, when $Q=0$ there is division by 0. What will we put on the table for these calculations at this point? ? (Is it ZERO or is it UNDEFINED?)

WAYS TO CHECK YOUR WORK:

- As a check, be sure that you see: $TC=FC+VC$ (Equation 1 should hold)
- As a check, be sure that you see: $ATC=AFC+AVC$ (Equation 6 should hold)
- You should see marginal costs decreasing then increasing. If you don't, you have made an error.
- As a check, make sure that AFC is a continuously declining function.

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■ = AVC ■ = MC ■ = ATC

* each is undefined at 0.