Student 1:

4.1

Chile $360 (1, 360)

Chile + 1 $360/2 = $180 (2, 180)

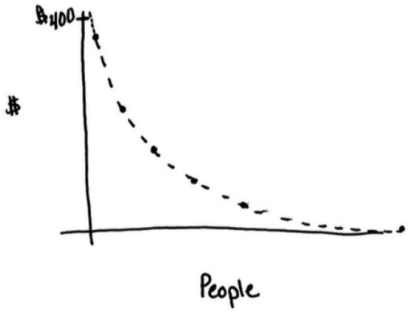
Chile + 2 $360/3 = $120 (3, 120)

Chile + 4 $360/5 = $72 (5, 72)

Chile + 9 $360/10 = $36 (10, 36)

Chile + 99 $360/100 = $3.60 (100, 3.60)

The function is exponential.



Student 2:

4.1

People	Cost
1	360
2	180
3	120
4	90
5	72
6	60
7	51.42857...
8	45
9	40
10	36

> -180 > 120 > -60 > 30 > -30 > 12 > -18 > 6 > -12 > 3.4285... > -8.5714 > 2.142857... > -6.42857 > 1.42857... > -5 > 1 > -4

Not Quadratic

360/180 = 2

180/120 = 1.5

120/90 = 1.$\bar{3}$

90/72 = 1.25

Not exponential b/c no common ratio

Student 3:

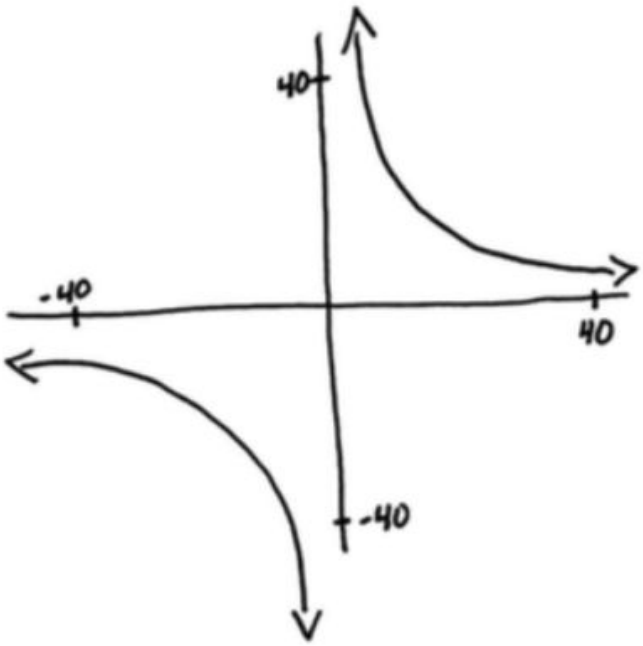
4.1

$$f(x) = \frac{360}{n}$$

$$f(x) = \frac{360}{x}$$

where x is the number of people and f(x) is the cost ~~be~~ per person.

x	f(x)
1	$360/1 = 360$
2	$360/2 = 180$
3	$360/3 = 120$
4	$360/4 = 90$
5	$360/5 = 72$
6	$360/6 = 60$



Domain: $(-\infty, \infty)$

Range: $(-\infty, \infty)$

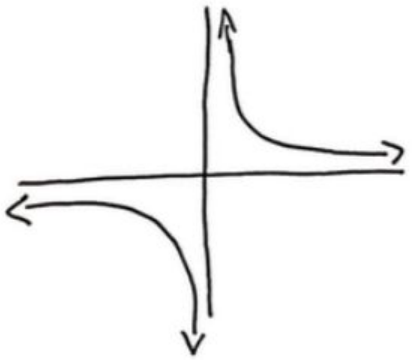
As $x \to -\infty$, $y \to 0$

As $x \to \infty$, $y \to 0$

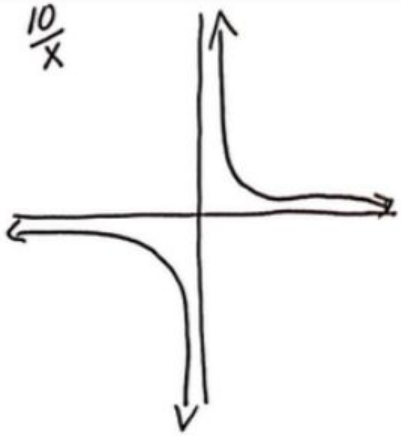
Student 4:

4.5

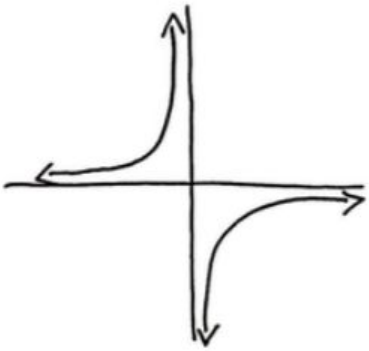
$\frac{1}{x}$



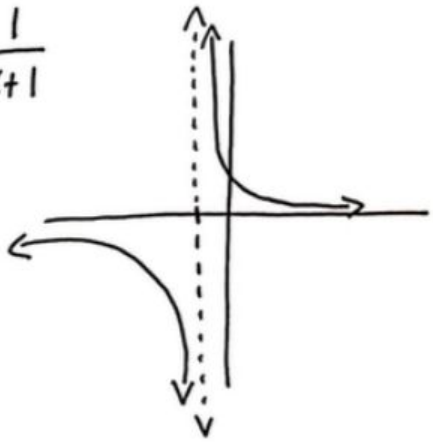
$\frac{10}{x}$



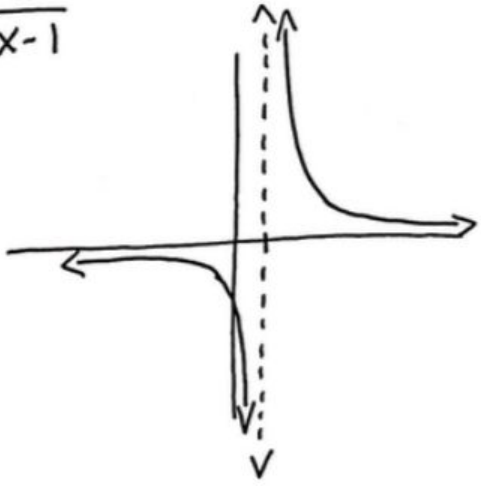
$-\frac{1}{x}$



$\frac{1}{x+1}$



$\frac{5}{x-1}$



Marcus is right. The end behavior for all rational functions approaches zero. By changing the denominator the graph translates left and right.