

2.1-graded

48. $C(x) = a + bx$ (cost of producing x kilowatts)
 a = fixed costs b = unit costs

$$\bar{C}(x) = \frac{C(x)}{x} \text{ (average cost)}$$

What happens to the average cost as x heads towards zero?

Let $a = 10$
 $b = 2$ } for the equation $C(x) = a + bx$

x	$C(x)$	$\frac{C(x)}{x}$
1	12	12
.5	11	22
.25	10.5	42
.01	10.02	1002
.001	10.002	10,002
.0001	10.0002	100,002
$1E-7$	10	100,000,000

As x heads towards zero the average cost increases. The increase is very dramatic.

I made up values for $a + b$ and experimented with different values that get closer to zero. I also know that the smaller the number that is in the denominator or being divided into the larger the answer will be.