Question 2.

$f'(x) = 3x^2 + 2x - 1$

Critical value: x

$x = -1$

Function at the critical value.

$(x, y) = (-1, 7)$

Function of the end points:

$(x, y) = (-3, -9)$ - smaller x-value

$(x, y) = (0, 6)$ - larger x-value

Absolute maximum: $(-1, 7)$

Absolute minimum: $(-3, -9)$

Question 4

$x = 30$ units

Minimum average cost per unit: $6

Question 8

360 feet

Question 13

horizontal asymptotes: DNE

Vertical asymptote: $x = 0$

Graph: 2nd graph