Exercício 1 a 10
Cálculo 1

1) c

2- a

3- $S(n) = \left(3 + \frac{12}{n}\right)$

a)
$S(7) = \left(3 + \frac{12}{3}\right) = 7$ minutos

Incorreto

b) $S(5) = \left(3 + \frac{12}{5}\right) 3 + 2,4 = 5,4$ minutos

Segundos 0, 4

Incorreto

1 minuto — 60 segundo
0,4 minuto — x

$1 \cdot x = 60 \cdot 0,4$

24 segundo

c) $S(3) = \left(3 + \frac{12}{3}\right) = 3 + 4 = 7$ minutos (incorreto)

d) $S(10) = 3 + \frac{12}{10} = 3 + 1,2$ 4,2 minutos

e) $S_m(3,5) = \left(3 + \frac{12}{\quad}\right) \Rightarrow 3,5 - 3 = \frac{12}{\quad}$

$0,5 = \frac{12}{n} \Rightarrow 0,5n = 12$

$n = \frac{12}{0,5} = 24$ tentativas

3 arremessadas e 30 segundos

4) $f(x) = \frac{1}{x-1}$

$\frac{1}{x-1} = 1 \Rightarrow \frac{1}{\frac{1}{x-1} - 1} = 1$

$\frac{1}{\frac{1-x+1}{x-1}} = 1 \Rightarrow \frac{1}{\frac{2-x}{x-1}} = 1$

$\frac{x-1}{2-x} = 1 \qquad x - 1 = 2 - x$

$x + x = 2 + 1$

$2x = 3$

$x = \frac{3}{2} \qquad x = 1,5$

(C) 1,5

5)

$Co = 2x + p - 10$

$x = \frac{(10-p)}{2}$ I

$Cd = p^2 - 8x - 5$

$8x = p^2 - 5$

$x = \frac{(p^2-5)}{8}$ II

Igualando

$\frac{(p^2-5)}{8} = \frac{(10-p)}{2}$

~~$p^2 - 5 = 40$~~

~~$p^2 - 5 = 40 - 4x$~~

~~8~~

$p^2 + 4p - 45 = 0$

~~$p^2 + 4p$~~

$x = \frac{-4 + \sqrt{4^2 - 4.1(-45)}}{2.1} = 5$

$x = \frac{-4 - \sqrt{4^2 - 4.1(-45)}}{2.1} = -9$

$(5, -9)$ (d)

Substituindo

$x = \left(\frac{10-5}{\quad}\right) = 2,5$

6)

$5300 - 900 = 4400$

$100\% \quad - \quad x$

$20\% \quad \quad 970$

$4400 \times 0,20 = 880 + 30$

970 de multa

$20x = 97000$

$x = \frac{97000}{20}$

$5300 -$ (d)

$x = 4850$

7) $S(x) = \sqrt{x^2 + 1}$

$x^2 + 1 \geq 0$

$x^2 \geq -1$ (b)