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$$\lim_{x\to 2} \frac{\operatorname{sen}^2 \pi x + \arccos(x-3)}{\operatorname{sen} \pi x} \log\left(3^x + x - 10\right) =$$

$$= \lim_{x\to 2} \frac{\operatorname{sen}^2 \pi x + \arccos(x-3)}{\operatorname{sen} \pi x} \log\left[1 + (3^x + x - 11)\right] =$$

$$\to \pi$$

$$= \lim_{x\to 2} \frac{\operatorname{sen}^2 \pi x + \arccos(x-3)}{\operatorname{sen} \pi x} (3^x + x - 11) \underbrace{\frac{\log(1 + 3^x + x - 11)}{3^x + x - 11}}_{\to 1} =$$

$$x - 2 = y \;;\; x = 2 + y \;;\; x \to 2 \;;\; y \to 0$$

$$= \lim_{y\to 0} \frac{3^{y+2} + 2 + y - 11}{\operatorname{sen}(2\pi + \pi y)} = \pi \lim_{y\to 0} \frac{9(3^y - 1) + y}{\operatorname{sen}(2\pi + \pi y)} =$$

$$= \pi \lim_{y\to 0} \frac{\pi y}{\pi \operatorname{sen} \pi y} \left[9 \frac{3^y - 1}{y} + 1\right] = 1 + 9 \log 3$$