Computer lab Preparation - Week 11.

2(a)   let's calculate $f(x)$ values ~~corresponding~~ corresponding to each x

x	-2	-1	0	1	2
$f(x)$	$9/4$	1	$1/4$	0	$1/4$

$$E(X) = \sum_{x=-2}^{2} x \, f(x)$$

$$= (-2) \cdot \tfrac{9}{4} + (-1) \cdot 1 + 0 \cdot \tfrac{1}{4} + 1 \cdot 0 + 2 \cdot \tfrac{1}{4}$$

$$= -5$$

$E(X)$ should be equal to μ ~~~~. Is this true in this case?

$$\mu = \frac{9/4 + 1 + 1/4 + 0 + 1/4}{5} = 0.75 = \tfrac{3}{4}.$$

$\therefore \quad \mu \neq E(X)$,
$\therefore \quad E(X)$ of f does not make any sense.