

$$z = \frac{2}{1-i} + 1 - 4i$$

1) First perform the division: $\frac{2}{1-i} \cdot \frac{1+i}{1+i} = \frac{2(1+i)}{1^2 - i^2} = \frac{2+2i}{1-(-1)} = \frac{2+2i}{2} = \frac{2}{2} + \frac{2}{2}i = 1+i$

2) Now add: $z = 1+i+1-4i = 2-3i$