Physical quantities and their units

1. a.) Assign the given physical units to the correct physical quantity.

   b.) Convert the physical units to the units listed in parentheses.

   c.) Indicate whether the result is expressed in a based unit (or a multiple). If not, express it using based units.

a)	7m	[km] ,	b)	$0,006$m	[μm] ,	c)	3200μm	[nm] ,	d)	$7,1$dm	[m] ,
e)	$0,02$ha	[m^2] ,	f)	$0,5$l	[ml] ,	g)	$0,35$cl	[m^3] ,	h)	$0,03$kg	[g] ,
i)	$0,25$t	[kg] ,	j)	$2,1$s	[ns] ,	k)	7ns	[ms] ,	l)	15min 25s	[s] ,
n)	6h 15min 45s	[s] ,	o)	1d 3h 12min	[min] ,	p)	11h 28min	[min] ,	r)	92700μA	[mA] ,
r)	52mA	[A] ,	s)	334.56 ℃	[K] ,	t)	9K	[℃] ,	u)	7Pa	[kPa] ,
v)	$0,1$TPa	[Pa] ,	x)	80J	[kJ] ,	y)	3620MJ	[J] ,	z)	7200eV	[J] .

2. Convert the units of velocity, acceleration, and density to the units listed in parentheses:

a)	90km.h^{-1}	[m.s^{-1}] ,	b)	45km.h^{-1}	[m.s^{-1}] ,
c)	$0,9$m.s^{-1}	[km.h^{-1}] ,	d)	$0,05$m.s^{-1}	[km.h^{-1}] ,
e)	35km.h^{-2}	[m.s^{-2}] ,	f)	70km.h^{-2}	[m.s^{-2}] ,
g)	$0,32$m.s^{-2}	[km.h^{-2}] ,	h)	$0,07$m.s^{-2}	[km.h^{-2}] ,
i)	$0,003$kg.m^{-3}	[g.cm^{-3}] ,	j)	8.10^{-5}kg.m^{-3}	[g.cm^{-3}] ,
k)	50g.cm^{-3}	[kg.m^{-3}] ,	l)	$875,2$g.cm^{-3}	[kg.m^{-3}] .

3. The defining equation of mass heat capacity is $c = \frac{1}{m} \cdot \frac{\Delta Q}{\Delta t}$. Express the unit of mass heat capacity using the base units.