I have defined a horisontal line segment that is 10 units long, from (0,0) to (10,0). Depending on the different settings below, the table shows what the measured length is (as displayed by measure tool)

"Layer Units" is set in Project properties → general
"Preferred measurment units is set in Settings → Options → Map tools
"Ellipsoidal" is set in the Measure dialog that opens up

On the fly projection is **OFF**

Layer CRS	Layer units	Preferred measurement units	Ellipsoidal	Value (approx!)
WGS 84 / EPSG 4326	degree	meters	yes	1100 km
WGS 84 / EPSG 4327	degree	meters	no	10 degrees
WGS 84 / EPSG 4328	degree	feet	yes	690 miles
WGS 84 / EPSG 4329	degree	feet	no	10 degrees
WGS 84 / EPSG 4330	feet	meters	yes	1100 km
WGS 84 / EPSG 4331	feet	meters	no	3 m
WGS 84 / EPSG 4332	feet	feet	yes	690 miles
WGS 84 / EPSG 4333	feet	feet	no	10 feet
WGS 84 / EPSG 4334	meters	meters	yes	1100 km
WGS 84 / EPSG 4335	meters	meters	no	10 m
WGS 84 / EPSG 4336	meters	feet	yes	690 miles
WGS 84 / EPSG 4337	meters	feet	no	33 feet
WGS 84 merc / EPSG 3395	degree	meters	yes	1100 km
WGS 84 merc / EPSG 3396	degree	meters	no	10 degrees
WGS 84 merc / EPSG 3397	degree	feet	yes	690 miles
WGS 84 merc / EPSG 3398	degree	feet	no	10 degrees
WGS 84 merc / EPSG 3399	feet	meters	yes	1100 km
WGS 84 merc / EPSG 3400	feet	meters	no	3 m
WGS 84 merc / EPSG 3401	feet	feet	yes	690 miles
WGS 84 merc / EPSG 3402	feet	feet	no	10 feet
WGS 84 merc / EPSG 3403	meters	meters	yes	1110 km
WGS 84 merc / EPSG 3404	meters	meters	no	10 m
WGS 84 merc / EPSG 3405	meters	feet	yes	690 miles
WGS 84 merc / EPSG 3406	meters	feet	no	33 feet