

AIW T80s

by David Myers

Values are derived by using data from various sources and the Arvold formulas on the IMSTRAT site(1). To summarize the Arvold formulas quickly:

AF is equivalent RHA penetration (in mm) at 500 meters divided by 10.

DF is equivalent RHA protection (approx best) across the front of the tank divided by 10.

Speed is max (road) speed divided by 3 for PB/PL speeds, divided by 5 for AIW speeds.

Unlike WW II units, where the approximation is made that all units are firing steel APCBC rounds, post 1975 we can't make that assumption anymore and accurately model combat. The AP round the tank is using primarily has to factor into the calculations. Hence, the round is printed on the counter in these examples.

When penetration is quoted at figures greater than 500 meters, we make the simplifying assumption that large modern rounds essentially do not lose kinetic energy from 500 to 1000 or 2000 meters. This is "good enough" for our purposes.

The T80 versions are gunned approximately as they could have been in Desert Storm, using a round fielded in 1985. The one exception is the T84, which was not equipped by any army until 1999(2). It was given a better Soviet penetrator.

For DFs, I've tended to use glacis armor values. For thicknesses, I've tended to use Jack Collin's numbers, supplemented by sources such as Vasily Fofanov's site and the Wikipedia.

The speed of these units was obtained by dividing max speed by 5.

Ranges for 125mm gunned tanks are established by a convention, which goes something like this:

Poor tank handling, unable to use range finding	6
Reasonably well taught, inadequately trained troops	8
Reasonably trained troops	10
Well trained front line troops	12

As the Soviet flag counter sets are to represent front line troops, we give them a front line range.

The ratio to the right of the defense factor (if present) is to be multiplied into the AF of G class units before combat, to correct for the increased effectiveness of ERA or composite armor against shaped charges.

References

1. Arvold ,Alan, various, “<http://www.imaginative-strategist.layfigures.com/IMSTRAT%20PB%20Class.html>”, downloaded June 2010.
2. Wikipedia entry, “T-84”, url: <http://en.wikipedia.org/wiki/T-84>“, accessed July 21, 2010
3. Baryatinskiy, Mikhail, “Main Battle Tank T-80“, Ian Allen Publishing, 2007

Data Sources

1. <http://collinsj.tripod.com/protect.htm>
2. <http://fofanov.armor.kiev.ua/Tanks/ARM/apfsds/ammo.html>
3. <http://fofanov.armor.kiev.ua/Tanks/MBT/t-80.html>