Helping Bardor Choose a Melee Weapon

Bardor BattleHammer has the choice of the following weapons:

```
damageTable = readtable("weapons.csv", "TextType","string")
```

damageTable = 6x4 table

	Weapon	NumDice	NumSides	AttrBonus
1	"Battleaxe"	1	10	3
2	"SalemiBlade"	2	4	0
3	"Handaxe"	2	6	0
4	"Mace"	1	8	3
5	"Rapier of Doom"	2	8	0
6	"Shortsword of Mayhem"	3	4	3

Bardor, being a Dwarf Barbarian, is not up on his probability and cannot figure out which weapon would do the most damage on average. To help Bardor, I've run a Monte Carlo Simulation with 10,000 iterations. Here are the results:

```
damageTotal = zeros(size(damageTable.NumSides));
for ii = 1:10000
    damageTotal = damageTotal + damageRoll(damageTable.NumDice,
damageTable.NumSides, damageTable.AttrBonus);
end
damageTable.AvgDamage = round(damageTotal ./ 10000,1);
damageTable
```

damageTable = 6x5 table

	Weapon	NumDice	NumSides	AttrBonus	AvgDamage
1	"Battleaxe"	1	10	3	8.5
2	"SalemiBlade"	2	4	0	5
3	"Handaxe"	2	6	0	7
4	"Mace"	1	8	3	7.5
5	"Rapier of Doom"	2	8	0	9
6	"Shortsword of Mayhem"	3	4	3	10.5

```
function damage = damageRoll(numdice, sides, attbonus);
    damage = zeros(size(sides));
    for ii = 1:numel(damage)
        for rr = 1:numdice(ii,1)
            damage(ii) = damage(ii) + randi([1,sides(ii,1)]);
        end
    end
```

```
    damage = damage + attbonus;
end
```