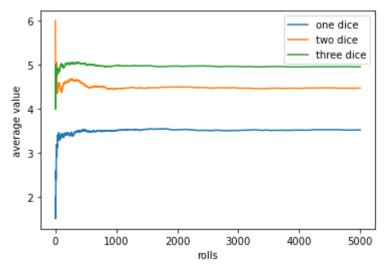
```
In [1]:
        from dataclasses import dataclass
         from random import randint
         import numpy as np
         import pandas as pd
         import matplotlib.pyplot as plt
In [2]:
         @dataclass
         class Die:
             Simple interface for rolling an n-sided die
             n: int = 6
             def __call__(self) -> int:
                  return randint(1, self.n)
In [3]:
         Verify that the die works how we expect
         die = Die()
         x = np.arange(1, 1001)
         rolls = [die() for _ in x]
         plt.plot(x, np.cumsum(rolls)/(x))
         plt.xlabel("rolls")
         plt.ylabel("average value")
         plt.show()
           4.4
           4.2
           4.0
         average value
           3.8
           3.6
           3.4
           3.2
           3.0
                                 400
                                                  800
                                                          1000
                0
                        200
                                         600
                                     rolls
         We see our EV is, as expected, about 3.5.
```

```
In [4]: @dataclass
class Dice:
    """
    Simple interface for a bunch of dice
    """
    dice: list[Die]

    def __call__(self) -> list[int]:
```

```
Returns three rolls in descending order
"""
return sorted([die() for die in self.dice], reverse=True)
```

```
In [5]:
        Verify that rolling a bunch of dice and taking the highest
        number works as we expect.
        two_dice = Dice([die, die])
        three_dice = Dice([die, die, die])
        x = np.arange(1, 5001)
        one = [die() for _ in x]
        two = [two_dice()[0] for _ in x]
        three = [three_dice()[0] for _ in x]
        plt.plot(x, np.cumsum(one)/(x), label="one dice")
        plt.plot(x, np.cumsum(two)/(x), label="two dice")
        plt.plot(x, np.cumsum(three)/(x), label="three dice")
        plt.legend()
        plt.xlabel("rolls")
        plt.ylabel("average value")
        plt.show()
```



We see our EV's follow the expected pattern, 5 for 3 dice, 4.5 for 2 dice, 3.5 for 1 die.

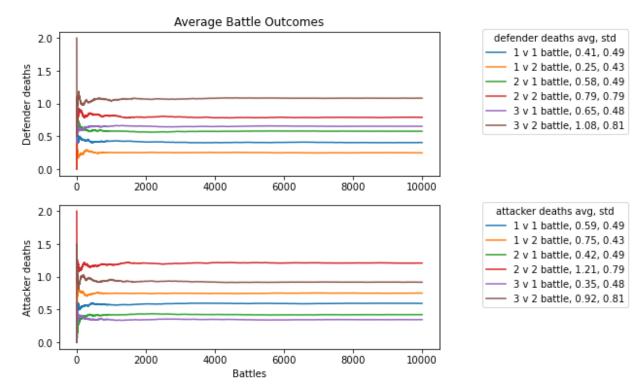
```
In [6]: @dataclass
class Battle:
    """

Battle two sets of dice and give the outcome for each matched pair of dice
    (attacker vs defender), True if attacker gets the kill and False if attacker
    is killed.
    """
    attackers: Dice
    def __post_init__(self):
        self.n_kills = min(len(self.attackers.dice), len(self.defenders.dice))

def __call__(self) -> list[bool]:
    return [
```

```
In [7]:
        x = np.arange(1, 10001)
        fig, [def_ax, atk_ax] = plt.subplots(2, figsize=(7, 6))
        for n_atk in range(1, 4):
            for n_def in range(1, 3):
                 battle = Battle(Dice([die] * n_atk), Dice([die] * n_def))
                 n_kills = min(n_atk, n_def)
                def_deaths = [sum(battle()) for _ in x]
                 atk_deaths = [n_kills - def_death for def_death in def_deaths]
                 def_ax.plot(
                    Χ,
                    np.cumsum(def_deaths)/(x),
                    label=f"{n_atk} v {n_def} battle, {np.mean(def_deaths):.2f}, {np.st
                 atk_ax.plot(
                    Χ,
                    np.cumsum(atk_deaths)/(x),
                    label=f"{n_atk} v {n_def} battle, {np.mean(atk_deaths):.2f}, {np.st
        def_ax.set_title("Average Battle Outcomes")
        atk_ax.legend(bbox_to_anchor=(1.1, 1.05), title="attacker deaths avg, std")
        def_ax.legend(bbox_to_anchor=(1.1, 1.05), title="defender deaths avg, std")
        atk_ax.set_ylabel("Attacker deaths")
        def_ax.set_ylabel("Defender deaths")
        atk_ax.set_xlabel("Battles")
```





Here we see the outcome for each kind of battle possible in the game. The numbers generally

make sense and scale in reasonable ways.

```
1 v 1: defender is favored by ~1/6, i.e. tie advantage
2 v 1: defender gets the kill 43% of the time
2 v 2: defender advantage is higher than it is in 1 v 1
3 v 1: clutch factor, defender still wins 1/3 the time
3 v 2: kind of the big point to make here, attacker is slightly favored
```

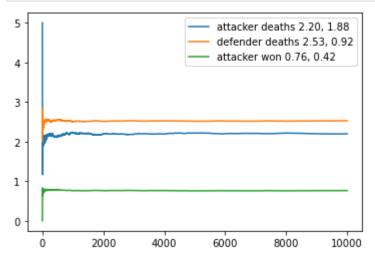
```
@dataclass
In [8]:
        class StandardWarOfAttrition:
            Attacker begins a war of attrition with some number of units. Staging for
            the battle is reset after each battle, following the standard rules.
            attacker units: int
            defender_units: int
            def __post_init__(self):
                 self.battle_dict = {}
                for a in range(1, 4):
                    for b in range(1, 3):
                         self.battle_dict[f"{a}{b}"] = Battle(
                             Dice([die] * a),
                             Dice([die] * b)
            def __call__(self):
                remaining_attackers = self.attacker_units
                 remaining_defenders = self.defender_units
                while remaining_attackers and remaining_defenders:
                    battle = self.battle dict[
                         f"{min(3, remaining_attackers)}{min(2, remaining_defenders)}"
                    ]()
                    remaining_defenders -= sum(battle)
                    remaining_attackers -= len(battle) - sum(battle)
                     self.attacker_units - remaining_attackers,
                     self.defender_units - remaining_defenders,
                    remaining_attackers > 0
                 )
```

```
In [9]: five_v_three = StandardWarOfAttrition(5, 3)

x = np.arange(1, 10000)
outcomes = [five_v_three() for _ in x]
atk_deaths = [out[0] for out in outcomes]
def_deaths = [out[1] for out in outcomes]
atk_won = [out[2] for out in outcomes]
plt.plot(
    x,
    np.cumsum(atk_deaths)/(x),
    label=f"attacker deaths {np.mean(atk_deaths):.2f}, {np.std(atk_deaths):.2f})

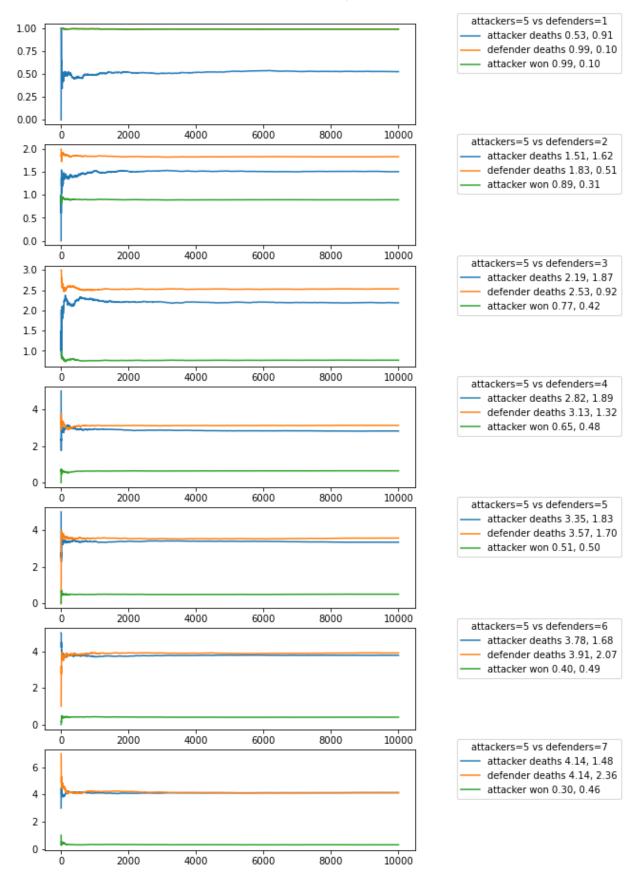
plt.plot(
    x,
    np.cumsum(def_deaths)/(x),
    label=f"defender deaths {np.mean(def_deaths):.2f}, {np.std(def_deaths):.2f}
```

```
plt.plot(
    x,
    np.cumsum(atk_won)/(x),
    label=f"attacker won {np.mean(atk_won):.2f}, {np.std(atk_won):.2f}"
)
plt.legend()
plt.show()
```



Here we get the first look at what happens on average in wars of attrition, using the standard rules. In a 5 vs 3, the attacker usually wins, whaddya know! EV is 0.77, 77% chance of a win. That said, the standard deviation is %42!! Huge!

```
In [10]:
         defenders = 7
         fig, axs = plt.subplots(defenders, figsize=(7, 16))
         for defenders, ax in zip(range(1, defenders + 1), axs):
             five_v_x = StandardWarOfAttrition(5, defenders)
             x = np.arange(1, 10000)
             outcomes = [five_v_x() for _ in x]
             atk_deaths = [out[0] for out in outcomes]
             def_deaths = [out[1] for out in outcomes]
             atk_won = [out[2] for out in outcomes]
             ax.plot(
                 Χ,
                 np.cumsum(atk_deaths)/(x),
                 label=f"attacker deaths {np.mean(atk_deaths):.2f}, {np.std(atk_deaths)
             ax.plot(
                 np.cumsum(def_deaths)/(x),
                 label=f"defender deaths {np.mean(def_deaths):.2f}, {np.std(def_deaths)
             ax.plot(
                 Χ,
                 np.cumsum(atk_won)/(x),
                 label=f"attacker won {np.mean(atk_won):.2f}, {np.std(atk_won):.2f}"
             ax.legend(bbox_to_anchor=(1.1, 1.15), title=f"attackers=5 vs {defenders=}"
         plt.show()
```



Here we're looking for the expected outcome with 5 attackers and n defenders, going from 1 to 7. To make sure things make sense and add up, let's look at the first plot briefly. The plot claims that on average, in a 5 v 1,  $\sim$ 0.54 attackers die. However, in a 3 v 1 (the first battle in the war of attrition), we can reference above and find that 0.34 attackers die? What gives?

Well,

```
0.58 \approx 0.34 + 0.34 \cdot 0.43 + 0.34 \cdot 0.45 \cdot 0.41 + 0.34 \cdot 0.45 \cdot 0.41 \cdot 0.41
```

if we add the chances that the *next* battle results in one attacker death, on and on, where one attacker dies 43% of the time in a 2 v 1 and 41% of the time in a 1 v 1. Considering the standard deviation is ~0.54 attackers die, +/- 0.9 attackers, the outcome is relatively close.

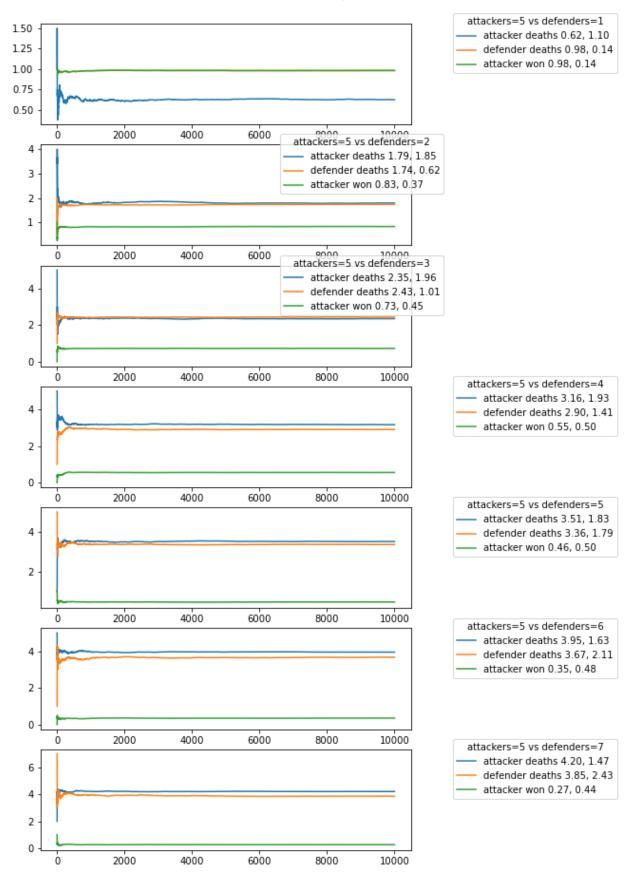
Further notes, obviously the chance that the attacker wins goes down each time you add a defender, usually by around 11% per defender. We can see in the 5 v 5 that the attacker is favored slightly, but variance is very high.

In a 5 v 7 we see that the same number of attackers and defenders die on average, even though the defenders still win 3/10 of the time.

```
In [11]:
         @dataclass
         class TableWarOfAttrition:
             Attacker begins a war of attrition with some number of units. Staging for
             the battle is only reset after either staged party is wiped, following odd
             table rules.
             attacker units: int
             defender_units: int
             def __post_init__(self):
                 self.battle_dict = {}
                 for a in range(1, 4):
                     for b in range(1, 3):
                          self.battle_dict[f"{a}{b}"] = Battle(
                              Dice([die] * a),
                              Dice([die] * b)
             def __call__(self):
                 remaining_attackers = self.attacker_units
                 remaining_defenders = self.defender_units
                 while remaining_attackers and remaining_defenders:
                      staged_attackers = min(3, remaining_attackers)
                      staged_defenders = min(2, remaining_defenders)
                     while staged_attackers and staged_defenders:
                         battle = self.battle_dict[
                              f"{staged_attackers}{staged_defenders}"
                         ]()
                         remaining_defenders -= sum(battle)
                         remaining_attackers -= len(battle) - sum(battle)
                          staged_defenders -= sum(battle)
                          staged_attackers -= len(battle) - sum(battle)
                 return (
                     self.attacker_units - remaining_attackers,
                     self.defender_units - remaining_defenders,
                     remaining_attackers > 0
                  )
```

```
In [12]: defenders = 7
fig, axs = plt.subplots(defenders, figsize=(7, 16))
```

```
for defenders, ax in zip(range(1, defenders + 1), axs):
    five_v_x = TableWarOfAttrition(5, defenders)
    x = np.arange(1, 10000)
    outcomes = [five_v_x() for _ in x]
    atk_deaths = [out[0] for out in outcomes]
    def_deaths = [out[1] for out in outcomes]
    atk_won = [out[2] for out in outcomes]
    ax.plot(
        Χ,
        np.cumsum(atk_deaths)/(x),
        label=f"attacker deaths {np.mean(atk_deaths):.2f}, {np.std(atk_deaths)
    ax.plot(
        Χ,
        np.cumsum(def_deaths)/(x),
        label=f"defender deaths {np.mean(def_deaths):.2f}, {np.std(def_deaths)
    ax.plot(
        Х,
        np.cumsum(atk_won)/(x),
       label=f"attacker won {np.mean(atk_won):.2f}, {np.std(atk_won):.2f}"
    ax.legend(bbox_to_anchor=(1.1, 1.15), title=f"attackers=5 vs {defenders=}"
plt.show()
```



We can see that things changed, but it's hard to compare. Lets look more closely at how these six values - attacker deaths and variance, defender deaths and variance, attacker won and variance - change when you go from standard to table rules.

```
@dataclass
In [13]:
         class AttritionEvaluator:
             n_iterations: int
             def __call__(
                 self,
                 war_of_attrition: StandardWarOfAttrition | TableWarOfAttrition
                 return [war_of_attrition() for _ in range(self.n_iterations)]
In [14]: evaluator = AttritionEvaluator(50000)
         standard_results = pd.DataFrame(
             {
                 attackers: {
                     defenders: evaluator(StandardWarOfAttrition(attackers, defenders))
                     for defenders in range(1, 13)}
                 for attackers in range(1, 13)
             },
         table_results = pd.DataFrame(
             {
                 attackers: {
                     defenders: evaluator(TableWarOfAttrition(attackers, defenders))
                     for defenders in range(1, 13)}
                 for attackers in range(1, 13)
             },
In [15]:
         table_results.axes[1].name = "attackers"
         table_results.axes[0].name = "defenders"
         standard_results.axes[1].name = "attackers"
         standard_results.axes[0].name = "defenders"
         def attacker_deaths_mean(outcomes):
In [16]:
             return np.mean([out[0] for out in outcomes])
         def attacker_deaths_std(outcomes):
             return np.std([out[0] for out in outcomes])
         def defender_deaths_mean(outcomes):
             return np.mean([out[1] for out in outcomes])
         def defender_deaths_std(outcomes):
             return np.std([out[1] for out in outcomes])
         def attacker_wins_mean(outcomes):
             return np.mean([out[2] for out in outcomes]) * 100
         def attacker_wins_std(outcomes):
             return np.std([out[2] for out in outcomes]) * 100
In [17]:
         def make_pretty(styler):
             styler.background_gradient(axis=None, cmap="YlGnBu")
             styler.format(precision=2)
             return styler
         for func in [
```

```
attacker_deaths_mean,
    attacker_deaths_std,
    defender_deaths_mean,
    defender_deaths_std,
    attacker wins mean,
    attacker_wins_std,
]:
    print(f"{func.__name__}, standard")
    func_standard = standard_results.applymap(func)
    func_table = table_results.applymap(func)
    display(func_standard.style.pipe(make_pretty))
    print(f"{func.__name__}, table")
    display(func_table.style.pipe(make_pretty))
    print(f"{func.__name__}, difference")
    display((func_table-func_standard).style.pipe(make_pretty))
attacker_deaths_mean, standard
                 2
                      3
                                           7
attackers
            1
                                      6
                                                8
                                                         10
                                                              11
                                                                   12
defenders
       1 0.58 0.66 0.56 0.53 0.52 0.52 0.52 0.51 0.51 0.52 0.51 0.52
              1.41 1.40 1.52 1.50 1.54 1.53 1.55 1.55 1.54
         0.97
              1.66
                   1.88 2.09 2.19 2.22 2.27 2.28
                                                  2.30 2.31 2.32 2.32
         0.99
               1.86
                   2.29
                        2.68
                             2.85
                                  3.00
                                        3.08
                                             3.12
                                                  3.18
                                                             3.20
                                                                  3.20
                                                       3.17
         1.00
               1.92 2.55 3.02 3.37
                                   3.59
                                        3.78 3.83
                                                  3.94
                                                       3.94
                                                            4.01 4.01
         1.00
               1.97
                    2.70
                         3.34
                              3.79
                                  4.14
                                        4.40
                                                       5.48
                                                            5.58
          1.00
               1.98
                    2.82
                         3.54
                              4.11
                                        4.94
                                             5.16
                                                  5.33
         1.00
               1.99
                    2.88
                         3.69
                             4.35
                                  4.93 5.35 5.70 5.95 6.15 6.30 6.40
          1.00
               2.00
                    2.93
                         3.79
                              4.55 5.18 5.73 6.14 6.50
                                                       6.73
                                                            6.98
          1.00
               2.00
                    2.96
                         3.86
                              4.68 5.41 6.00 6.55 6.95
                                                       7.31
               2.00
                    2.97 3.91 4.77
                                             6.86 7.35 7.78
                                                             8.11
                                                                  8.36
      11
         1.00
                                   5.56 6.27
                                                                  8.94
         1.00
               2.00
                    2.98 3.94 4.84
                                   5.68 6.45 7.11 7.69 8.18 8.59
```

attacker\_deaths\_mean, table

attackers	1	2	3	4	5	6	7	8	ç	9 :	10	11	12	2
defenders														
1	0.58	0.67	0.57	0.61	0.63	0.61	0.62	0.62	0.62	2 0.	63 0	.62	0.62	<u>}</u>
2	0.89	1.41	1.40	1.68	1.81	1.78	1.86	1.87	1.87	7 1.9	90 1	.91	1.90	)
3	0.95	1.64	1.81	2.11	2.34	2.38	2.48	2.56	2.57	7 2.	59 2	.60	2.61	L
4	0.99	1.85	2.28	2.76	3.15	3.29	3.47	3.59	3.64	1 3.	71 3	.76	3.76	5
5	1.00	1.91	2.48	3.04	3.49	3.76	4.00	4.23	4.32	L 4.:	39 4	.45	4.51	
6	1.00	1.97	2.70	3.38	3.98	4.40	4.75	5.03	5.22	L 5.	37 5	.50	5.55	5
7	1.00	1.98	2.79	3.53	4.20	4.72	5.16	5.49	5.76	5.5	97 6	.16	6.22	2
8	1.00	1.99	2.89	3.71	4.47	5.09	5.64	6.10	6.44	4 6.	75 6	.96	7.14	ı
9	1.00	1.99	2.92	3.79	4.60	5.29	5.90	6.43	6.87	7 7.:	23 7	.55	7.79	þ
10	1.00	2.00	2.96	3.87	4.73	5.51	6.22	6.83	7.36	5 7.	81 8	.21	8.48	В
11	1.00	2.00	2.97	3.90	4.80	5.63	6.38	7.07	7.66	8.3	16 8	.64	9.02	2
12	1.00	2.00	2.98	3.94	4.87	5.74	6.56	7.32	7.99	8.	59 9	.11	9.55	5
attacker_	deat	he me		4: <b>4</b> 4-	3000	_								
ottookoro							6	7	0	0	10	1	1	12
attackers	1	2		3 3	4	e <b>5</b>	6	7	8	9	10	1	.1	12
defenders	1	2	:	3	4	5								
defenders 1	-0.00	0.00	0.0	1 0.0	08 0.	5 10 0.	09 0.	10 0	.11 (	0.11	0.12	0.1	.1 C	0.10
defenders 1 2	-0.00 0.00	0.00	0.0	<ul><li>3</li><li>1</li><li>0.0</li><li>0</li><li>0.1</li></ul>	4 08 0. 16 0.	5 10 0. 31 0.	09 0. 24 0.	10 0 33 0.	.11 (	0.11	0.12	0.1	.1 0	0.10
defenders	-0.00 0.00 -0.02	0.00 0.01 -0.02	0.0	1 0.0 0 0.1 7 0.0	4 08 0. 16 0. 02 0.	5 10 0. 31 0. 15 0.	09 0. 24 0. 15 0.	10 0 33 0. 21 0.	.11 ( 32 ( 28 (	).11 ).32 ).27	0.12 0.36 0.29	0.1 0.3 0.2	.1 C	0.10 0.34 0.30
defenders  1 2 3	-0.00 0.00 -0.02 -0.00	0.00 0.01 -0.02 -0.01	0.0	3 1 0.0 0 0.1 7 0.0 0 0.0	4 08 0. 16 0. 02 0. 08 0.	5 10 0. 31 0. 15 0. 29 0.	09 0. 24 0. 15 0. 29 0.	10 0 33 0. 21 0. 39 0.	.11 ( 32 ( 28 ( 47 (	0.11 0.32 0.27 0.47	0.12 0.36 0.29 0.54	0.1 0.3 0.2 0.5	.1 0 .6 0 .9 0	0.10 0.34 0.30 0.57
defenders  1 2 3 4	-0.00 0.00 -0.02	0.00 0.01 -0.02	0.0 0.0 -0.0 -0.0	3 0.00 0.17 0.00 0.00 0.00 0.00 0.00 0.00	4 08 0. 16 0. 02 0. 08 0. 01 0.	5 10 0. 31 0. 15 0. 29 0. 12 0.	09 0. 24 0. 15 0. 29 0.	10 0 33 0. 21 0. 39 0. 23 0.	.11 (32 (28 (47 (39 (39 (47 (47 (47 (47 (47 (47 (47 (47 (47 (47	).11 ).32 ).27	0.12 0.36 0.29	0.1 0.3 0.2	.1 0 .6 0 .9 0 .6 0	0.10 0.34 0.30
defenders  1 2 3 4 5	-0.00 0.00 -0.02 -0.00	0.00 0.01 -0.02 -0.01 -0.01	0.0 0.0 -0.0 -0.0 -0.0	3 0.00 0.17 0.00 0.00 0.00 0.00 0.00 0.00	4 08 0. 16 0. 02 0. 08 0. 01 0. 04 0.	5 10 0. 31 0. 15 0. 29 0. 12 0. 18 0.	09 0. 24 0. 15 0. 29 0. 17 0. 26 0.	10 0 33 0. 21 0. 39 0. 23 0. 35 0.	.11 ( 32 ( 28 ( 47 ( 39 ( 47 (	0.11 0.32 0.27 0.47	0.12 0.36 0.29 0.54 0.45	0.1 0.3 0.2 0.5 0.4	1 0 66 0 9 0 66 0 4 0	0.10 0.34 0.30 0.57 0.50
1 2 3 4 5 6	-0.00 0.00 -0.02 -0.00 -0.00	0.000 0.01 -0.02 -0.01 -0.01	0.0 0.0 -0.0 -0.0 -0.0 -0.0	3	4 08 0. 16 0. 02 0. 08 0. 01 0. 04 0. 01 0.	5 10 0. 31 0. 15 0. 29 0. 12 0. 18 0. 09 0.	09 0. 24 0. 15 0. 29 0. 17 0. 26 0.	10 0 33 0. 21 0. 39 0. 23 0. 35 0.	.11 ( 32 ( 28 ( 47 ( 39 ( 47 ( 33 (	0.11 0.32 0.27 0.47 0.37	0.12 0.36 0.29 0.54 0.45	0.1 0.3 0.2 0.5 0.4	1 0 66 0 9 0 66 0 4 0	).34 ).30 ).57 ).50
1 2 3 4 5 6 7	-0.00 0.00 -0.02 -0.00 -0.00 -0.00	0.00 0.01 -0.02 -0.01 -0.01 -0.00	0.0 0.0 -0.0 -0.0 -0.0 -0.0 -0.0	3	4 008 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	5 10 0. 31 0. 15 0. 29 0. 12 0. 18 0. 09 0. 12 0.	09 0. 24 0. 15 0. 29 0. 17 0. 26 0. 16 0.	10 0 33 0. 21 0. 39 0. 23 0. 35 0. 22 0. 29 0.	11 (132 (132 (132 (132 (132 (132 (132 (1	0.11 0.32 0.27 0.47 0.37 0.54	0.12 0.36 0.29 0.54 0.45 0.61	0.1 0.3 0.2 0.5 0.4 0.7	11 0 66 0 99 0 66 0 4 0 70 0	).30 ).30 ).57 ).50 ).70
defenders  1 2 3 4 5 6 7 8	-0.00 0.00 -0.02 -0.00 -0.00 -0.00 -0.00	0.000 0.01 -0.02 -0.01 -0.00 -0.00 -0.00	0.0 0.0 -0.0 -0.0 -0.0 -0.0 0.0 -0.0	3	4 0.08 0.16 0.02 0.08 0.01 0.01 0.02 0.00 0.00 0.00	5 10 0. 31 0. 15 0. 12 0. 18 0. 09 0. 12 0. 05 0.	09 0. 24 0. 15 0. 29 0. 17 0. 26 0. 16 0. 16 0.	10 0 33 0. 21 0. 39 0. 23 0. 35 0. 22 0. 29 0.	11 (1) (2) (2) (2) (4) (4) (4) (4) (4) (4) (2) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	).32 ).27 ).47 ).37 ).54 ).43	0.12 0.36 0.29 0.54 0.45 0.61 0.49	0.1 0.3 0.2 0.5 0.4 0.7 0.5	11 C C C C C C C C C C C C C C C C C C	0.30 0.30 0.57 0.70 0.60
defenders  1 2 3 4 5 6 7 8 9	-0.00 0.00 -0.02 -0.00 -0.00 -0.00 -0.00	0.00 0.01 -0.02 -0.01 -0.00 -0.00 -0.00 -0.00	0.0 0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0	3 11 0.0 00 0.1 7 0.0 00 0.0 7 0.0 00 0.0 11 0.0 00 0.0	4 0.08 0.01 0.02 0.00 0.00 0.00 0.00 0.00 0.00	5 10 0. 31 0. 15 0. 29 0. 12 0. 18 0. 09 0. 12 0. 05 0.	09 0. 24 0. 15 0. 29 0. 17 0. 26 0. 16 0. 12 0. 10 0.	10 0 33 0. 21 0. 39 0. 23 0. 35 0. 22 0. 29 0. 18 0. 22 0.	11 (228 (247 (247 (247 (247 (247 (247 (247 (247	0.32 0.27 0.47 0.37 0.54 0.43 0.49	0.12 0.36 0.29 0.54 0.45 0.61 0.49 0.60	0.1 0.3 0.2 0.5 0.4 0.7 0.5 0.6 0.5	11 C C C C C C C C C C C C C C C C C C	0.34 0.30 0.57 0.50 0.70 0.71

file:///home/trevormaxjs/Downloads/Risk.html

 $attacker\_deaths\_std, \ standard$ 

attackers	1	2	3	4	5	6	7	8	9	10	11	12
defenders												
1	0.49	0.84	0.92	0.92	0.91	0.89	0.89	0.88	0.88	0.89	0.88	0.89
2	0.31	0.83	1.29	1.55	1.64	1.73	1.75	1.80	1.80	1.80	1.81	1.81
3	0.16	0.70	1.29	1.63	1.87	2.02	2.14	2.19	2.26	2.27	2.29	2.31
4	0.08	0.48	1.13	1.56	1.88	2.15	2.32	2.45	2.54	2.59	2.64	2.67
5	0.05	0.36	0.96	1.43	1.83	2.15	2.42	2.60	2.76	2.84	2.94	2.97
6	0.02	0.23	0.80	1.24	1.67	2.05	2.36	2.64	2.83	2.99	3.10	3.21
7	0.01	0.18	0.65	1.07	1.51	1.90	2.26	2.58	2.86	3.05	3.24	3.34
8	0.00	0.11	0.51	0.89	1.32	1.72	2.12	2.47	2.78	3.04	3.26	3.44
9	0.00	0.08	0.41	0.75	1.13	1.54	1.94	2.32	2.67	2.98	3.24	3.46
10	0.00	0.05	0.32	0.60	0.94	1.33	1.76	2.12	2.51	2.85	3.16	3.43
11	0.00	0.05	0.26	0.49	0.80	1.17	1.54	1.93	2.33	2.69	3.04	3.34
12	0.00	0.03	0.20	0.40	0.68	0.99	1.34	1.74	2.13	2.51	2.86	3.20
attacker	deat	he et	+ h	ahla								
accacher_	_uca c	113_3	tu, t	anie								
attackers	_ueac 1	2	3	4	5	6	7	8	9	10	11	12
		_			5	6	7	8	9	10	11	12
attackers		_			1.11	1.08	7	1.12	9	1.13	1.12	1.11
attackers defenders	0.49 0.31	2	0.93 1.29	1.07 1.65		1.08 1.92	1.12 2.08		1.12 2.15	1.13 2.22		1.11 2.23
attackers defenders	0.49	0.84	0.93	1.07	1.11	1.08	1.12	1.12	1.12 2.15 2.49	1.13 2.22 2.58	1.12	1.11 2.23 2.64
attackers defenders  1	0.49 0.31	0.84 0.83	0.93 1.29	1.07 1.65	1.11 1.87	1.08 1.92	1.12 2.08	1.12 2.15 2.45 2.68	1.12 2.15 2.49 2.78	1.13 2.22 2.58 2.92	1.12 2.24 2.64 3.03	1.11 2.23 2.64 3.05
attackers defenders  1 2 3	0.49 0.31 0.21 0.10	0.84 0.83 0.70	0.93 1.29 1.26	1.07 1.65 1.66 1.56 1.43	1.11 1.87 1.96 1.93 1.84	1.08 1.92 2.11	1.12 2.08 2.30 2.46 2.49	1.12 2.15 2.45	1.12 2.15 2.49 2.78 2.94	1.13 2.22 2.58 2.92 3.12	1.12 2.24 2.64 3.03 3.25	1.11 2.23 2.64 3.05 3.35
attackers defenders  1 2 3 4	0.49 0.31 0.21 0.10 0.07	0.84 0.83 0.70 0.48 0.37 0.23	3 0.93 1.29 1.26 1.12 1.00	1.07 1.65 1.66 1.56 1.43	1.11 1.87 1.96 1.93 1.84 1.62	1.08 1.92 2.11 2.19 2.17 1.99	1.12 2.08 2.30 2.46 2.49 2.36	1.12 2.15 2.45 2.68 2.75 2.69	1.12 2.15 2.49 2.78 2.94 2.93	1.13 2.22 2.58 2.92 3.12 3.16	1.12 2.24 2.64 3.03 3.25 3.37	1.11 2.23 2.64 3.05 3.35 3.49
attackers defenders  1 2 3 4 5 6 7	0.49 0.31 0.21 0.10 0.07 0.04	0.84 0.83 0.70 0.48 0.37 0.23	3 0.93 1.29 1.26 1.12 1.00 0.79 0.67	1.07 1.65 1.66 1.56 1.43 1.22	1.11 1.87 1.96 1.93 1.84 1.62	1.08 1.92 2.11 2.19 2.17 1.99	1.12 2.08 2.30 2.46 2.49 2.36 2.25	1.12 2.15 2.45 2.68 2.75 2.69	1.12 2.15 2.49 2.78 2.94 2.93 2.92	1.13 2.22 2.58 2.92 3.12 3.16 3.19	1.12 2.24 2.64 3.03 3.25 3.37 3.44	1.11 2.23 2.64 3.05 3.35 3.49 3.63
attackers defenders  1 2 3 4 5 6 7	0.49 0.31 0.21 0.10 0.07 0.04 0.02	0.84 0.83 0.70 0.48 0.37 0.23 0.19	3 0.93 1.29 1.26 1.12 1.00 0.79 0.67 0.50	1.07 1.65 1.66 1.56 1.43 1.22 1.07	1.11 1.87 1.96 1.93 1.84 1.62 1.47	1.08 1.92 2.11 2.19 2.17 1.99 1.85	1.12 2.08 2.30 2.46 2.49 2.36 2.25 2.01	1.12 2.15 2.45 2.68 2.75 2.69 2.62 2.40	1.12 2.15 2.49 2.78 2.94 2.93 2.92 2.75	1.13 2.22 2.58 2.92 3.12 3.16 3.19 3.07	1.12 2.24 2.64 3.03 3.25 3.37 3.44 3.35	1.11 2.23 2.64 3.05 3.35 3.49 3.63 3.59
attackers defenders  1 2 3 4 5 6 7 8	0.49 0.31 0.21 0.10 0.07 0.04 0.02 0.01	0.84 0.83 0.70 0.48 0.37 0.23 0.19 0.12	3 0.93 1.29 1.26 1.12 1.00 0.79 0.67 0.50 0.43	1.07 1.65 1.66 1.56 1.43 1.22 1.07 0.86 0.74	1.11 1.87 1.96 1.93 1.84 1.62 1.47 1.23	1.08 1.92 2.11 2.19 2.17 1.99 1.85 1.63	1.12 2.08 2.30 2.46 2.49 2.36 2.25 2.01 1.86	1.12 2.15 2.45 2.68 2.75 2.69 2.62 2.40 2.25	1.12 2.15 2.49 2.78 2.94 2.93 2.92 2.75 2.62	1.13 2.22 2.58 2.92 3.12 3.16 3.19 3.07 2.96	1.12 2.24 2.64 3.03 3.25 3.37 3.44 3.35 3.29	1.11 2.23 2.64 3.05 3.35 3.49 3.63 3.59 3.57
attackers defenders  1 2 3 4 5 6 7 8 9 10	0.49 0.31 0.21 0.10 0.07 0.04 0.02 0.01 0.01	0.84 0.83 0.70 0.48 0.37 0.23 0.19 0.12 0.09	3 0.93 1.29 1.26 1.12 1.00 0.79 0.67 0.50 0.43 0.32	1.07 1.65 1.66 1.56 1.43 1.22 1.07 0.86 0.74 0.59	1.11 1.87 1.96 1.93 1.84 1.62 1.47 1.23 1.08	1.08 1.92 2.11 2.19 2.17 1.99 1.85 1.63 1.46	1.12 2.08 2.30 2.46 2.49 2.36 2.25 2.01 1.86 1.59	1.12 2.15 2.45 2.68 2.75 2.69 2.62 2.40 2.25	1.12 2.15 2.49 2.78 2.94 2.93 2.92 2.75 2.62 2.37	1.13 2.22 2.58 2.92 3.12 3.16 3.19 3.07 2.96	1.12 2.24 2.64 3.03 3.25 3.37 3.44 3.35 3.29 3.09	1.11 2.23 2.64 3.05 3.35 3.49 3.63 3.59 3.57 3.42
attackers defenders  1 2 3 4 5 6 7 8	0.49 0.31 0.21 0.10 0.07 0.04 0.02 0.01	0.84 0.83 0.70 0.48 0.37 0.23 0.19 0.12	3 0.93 1.29 1.26 1.12 1.00 0.79 0.67 0.50 0.43	1.07 1.65 1.66 1.56 1.43 1.22 1.07 0.86 0.74	1.11 1.87 1.96 1.93 1.84 1.62 1.47 1.23	1.08 1.92 2.11 2.19 2.17 1.99 1.85 1.63	1.12 2.08 2.30 2.46 2.49 2.36 2.25 2.01	1.12 2.15 2.45 2.68 2.75 2.69 2.62 2.40 2.25	1.12 2.15 2.49 2.78 2.94 2.93 2.92 2.75 2.62	1.13 2.22 2.58 2.92 3.12 3.16 3.19 3.07 2.96	1.12 2.24 2.64 3.03 3.25 3.37 3.44 3.35 3.29	1.11 2.23 2.64 3.05 3.35 3.49 3.63 3.59 3.57

attacker\_deaths\_std, difference

								Risk					
attackers	1	2	3	3	4	5	6	7	8	9	10	11	12
defenders													
1	0.00	0.00	0.01	L 0.1	L4 0	.20	0.19	0.23	0.23	0.24	0.25	0.24	0.22
2	-0.00	-0.00	-0.00	0.1	LO 0	.24	0.19	0.34	0.35	0.35	0.42	0.43	0.42
3	0.05	0.00	-0.03	0.0	03 0	.09	0.08	0.16	0.26	0.23	0.31	0.35	0.33
4	0.02	0.01	-0.01	L 0.0	00 0	.05	0.04	0.13	0.23	0.24	0.34	0.39	0.39
5	0.02	0.01	0.03	3 -0.0	00 0	.01	0.02	0.07	0.15	0.18	0.28	0.31	0.39
6	0.02	-0.00	-0.01	L -0.0	02 -0	.05	-0.07	0.00	0.05	0.10	0.17	0.27	0.28
7	0.01	0.01	0.03	3 0.0	01 -0	.04	-0.05	-0.02	0.04	0.06	0.14	0.20	0.29
8	0.01	0.01	-0.01	L -0.0	03 -0	.09	0.09	-0.11	-0.08	-0.03	0.03	0.09	0.15
9	0.01	0.01	0.02	2 -0.0	01 -0	.05	-0.08	-0.08	-0.07	-0.05	-0.02	0.05	0.11
10	0.00	-0.00	0.00	0.0-	02 -0	.05	-0.09	-0.16	-0.13	-0.14	-0.12	-0.07	-0.01
11	0.00	-0.01	0.01	L 0.0	01 -0	.04	-0.09	-0.10	-0.11	-0.12	-0.10	-0.10	-0.03
12	0.00	-0.00	0.00	0.0	01 -0	.06	-0.08	-0.12	-0.18	-0.20	-0.19	-0.17	-0.13
defender_	_deatl		an, s	stand	lard								
attackers	1	2	3	4	5	6	;	7 8	3 9	10	11	12	
defenders													
1		0.76	0.92	0.97	0.99	1.00				1.00	1.00	1.00	
2	0.36	0.92	1.44	1.66	1.83	1.90				1.99	2.00	2.00	
3	0.34	1.08	1.84	2.23	2.54					2.96	2.98	2.99	
4	0.34	1.10	2.08	2.62	3.11	3.40				3.91	3.94	3.96	
5	0.34	1.14	2.21	2.93	3.55	3.99				4.81		4.92	
6		1.14				4.45			5.47			5.84	
	0.34	1.15	2.40	3.29		4.83				6.41		6.72	
	0.34	1.15	2.43	3.38								7.53	
	0.34	1.15	2.46	3.47								8.31	
	0.35	1.15	2.46	3.48	4.59					8.24	8.67	8.99	
		1.15	2.50									9.63	
12	0.34	1.15	2.47	3.55	4.70	5.74	6.6	9 7.63	8.39	9.10	9.69	10.17	

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defender\_deaths\_mean, table

defenders         1       0.00       -0.00       -0.00       -0.01       -0.00														
1 0.42 0.75 0.92 0.95 0.98 0.99 1.00 1.00 1.00 1.00 1.00 1.00 1.00	attackers	1	2	3	4	5	6	7	8	9	10	11	12	
2 0.36 0.91 1.44 1.57 1.73 1.87 1.90 1.94 1.97 1.98 1.99 1.99 3 0.41 1.14 1.96 2.17 2.43 2.69 2.76 2.84 2.92 2.93 2.96 2.98 4 0.40 1.17 2.18 2.52 2.91 3.33 3.49 3.64 3.79 3.84 3.89 3.94 5 0.41 1.23 2.42 2.88 3.37 3.92 4.15 4.37 4.59 4.70 4.79 4.86 6 0.40 1.25 2.52 3.03 3.64 4.32 4.65 4.98 5.30 5.46 5.60 5.74 7 0.41 1.25 2.62 3.23 3.89 4.69 5.11 5.54 5.94 6.18 6.37 6.56 8 0.40 1.25 2.63 3.29 4.03 4.94 5.47 5.94 6.46 6.78 7.06 7.31 9 0.40 1.24 2.70 3.39 4.17 5.15 5.75 6.33 6.93 7.35 7.67 8.00 10 0.40 1.24 2.69 3.42 4.27 5.30 5.96 6.62 7.29 7.78 8.19 8.61 11 0.40 1.25 2.71 3.51 4.32 5.38 6.12 6.84 7.61 8.20 8.66 9.13 12 0.40 1.26 2.72 3.48 4.35 5.49 6.26 7.02 7.85 8.46 9.05 9.60  defender_deaths_mean, difference attackers 1 2 3 4 5 6 6 7 8 9 9 10 11 12  defenders  1 0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 2 0.00 -0.01 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 2 0.00 -0.01 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 3 0.06 0.06 0.12 -0.05 -0.11 -0.03 -0.07 -0.06 -0.02 -0.03 -0.02 -0.01 4 0.06 0.07 0.10 -0.10 -0.20 -0.07 -0.13 -0.12 -0.06 -0.07 -0.06 -0.03 5 0.07 0.09 0.21 -0.05 -0.18 -0.07 -0.15 -0.17 -0.10 -0.10 -0.08 -0.06 6 0.06 0.11 0.19 -0.10 -0.26 -0.14 -0.25 -0.25 -0.25 -0.18 -0.18 -0.16 -0.09 7 0.07 0.10 0.22 -0.06 -0.28 -0.14 -0.25 -0.25 -0.25 -0.18 -0.18 -0.16 -0.09 7 0.07 0.10 0.22 -0.06 -0.28 -0.14 -0.25 -0.25 -0.25 -0.18 -0.18 -0.16 -0.09 7 0.07 0.10 0.22 -0.06 -0.28 -0.14 -0.25	defenders													
3 0.41 1.14 1.96 2.17 2.43 2.69 2.76 2.84 2.92 2.93 2.96 2.98  4 0.40 1.17 2.18 2.52 2.91 3.33 3.49 3.64 3.79 3.84 3.89 3.94  5 0.41 1.23 2.42 2.88 3.37 3.92 4.15 4.37 4.59 4.70 4.79 4.86  6 0.40 1.25 2.52 3.03 3.64 4.32 4.65 4.98 5.30 5.46 5.60 5.74  7 0.41 1.25 2.62 3.23 3.89 4.69 5.11 5.54 5.94 6.18 6.37 6.56  8 0.40 1.25 2.63 3.29 4.03 4.94 5.47 5.94 6.46 6.78 7.06 7.31  9 0.40 1.24 2.70 3.39 4.17 5.15 5.75 6.33 6.93 7.35 7.67 8.00  10 0.40 1.25 2.71 3.51 4.32 5.38 6.12 6.84 7.61 8.20 8.66 9.13  11 0.40 1.25 2.71 3.51 4.32 5.38 6.12 6.84 7.61 8.20 8.66 9.13  12 0.40 1.26 2.72 3.48 4.35 5.49 6.26 7.02 7.85 8.46 9.05 9.60  defender_deaths_mean, difference attackers 1 2 3 4 5 6 7 8 9 10 11 12  defenders  1 0.00 -0.00 -0.00 -0.00 -0.02 -0.01 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00  2 0.00 -0.01 -0.00 -0.09 -0.10 -0.03 -0.05 -0.03 -0.01 -0.01 -0.01 -0.00  3 0.06 0.06 0.12 -0.05 -0.11 -0.03 -0.07 -0.06 -0.02 -0.03 -0.02 -0.01  4 0.06 0.07 0.10 -0.05 -0.18 -0.07 -0.15 -0.17 -0.10 -0.10 -0.08 -0.06  6 0.06 0.11 0.19 -0.10 -0.20 -0.14 -0.25 -0.25 -0.18 -0.18 -0.16 -0.09  7 0.07 0.09 0.21 -0.05 -0.18 -0.07 -0.15 -0.17 -0.10 -0.10 -0.08 -0.06  6 0.06 0.11 0.19 -0.10 -0.28 -0.14 -0.28 -0.28 -0.22 -0.23 -0.22 -0.26  9 0.06 0.10 0.22 -0.05 -0.32 -0.19 -0.43 -0.49 -0.44 -0.46 -0.48 -0.37 -0.30  10 0.06 0.10 0.24 -0.08 -0.32 -0.19 -0.43 -0.49 -0.44 -0.46 -0.48 -0.37 -0.30  10 0.06 0.10 0.21 -0.05 -0.32 -0.19 -0.43 -0.49 -0.44 -0.46 -0.48 -0.37 -0.30  10 0.06 0.10 0.21 -0.08 -0.32 -0.19 -0.43 -0.49 -0.44 -0.46 -0.48 -0.37 -0.30	1	0.42	0.75	0.92	0.95	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00	
4 0.40 1.17 2.18 2.52 2.91 3.33 3.49 3.64 3.79 3.84 3.89 3.94 5 0.41 1.23 2.42 2.88 3.37 3.92 4.15 4.37 4.59 4.70 4.79 4.86 6 0.40 1.25 2.52 3.03 3.64 4.32 4.65 4.98 5.30 5.46 5.60 5.74 7 0.41 1.25 2.62 3.23 3.89 4.69 5.11 5.54 5.94 6.18 6.37 6.56 8 0.40 1.25 2.63 3.29 4.03 4.94 5.47 5.94 6.46 6.78 7.06 7.31 9 0.40 1.24 2.70 3.39 4.17 5.15 5.75 6.33 6.93 7.35 7.67 8.00 10 0.40 1.24 2.69 3.42 4.27 5.30 5.96 6.62 7.29 7.78 8.19 8.61 11 0.40 1.25 2.71 3.51 4.32 5.38 6.12 6.84 7.61 8.20 8.66 9.13 12 0.40 1.26 2.72 3.48 4.35 5.49 6.26 7.02 7.85 8.46 9.05 9.60  defender_deaths_mean, difference attackers 1 2 3 4 5 6 7 8 9 10 11 12  defenders  1 0.00 -0.00 -0.00 -0.02 -0.01 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 2 0.00 -0.01 -0.00 -0.09 -0.10 -0.03 -0.05 -0.03 -0.01 -0.01 -0.01 -0.00 3 0.06 0.06 0.12 -0.05 -0.11 -0.03 -0.05 -0.03 -0.01 -0.01 -0.01 -0.00 4 0.06 0.07 0.10 -0.10 -0.20 -0.07 -0.13 -0.12 -0.06 -0.02 -0.03 -0.02 -0.01 4 0.06 0.07 0.10 -0.10 -0.20 -0.07 -0.13 -0.12 -0.06 -0.07 -0.06 -0.03 5 0.07 0.09 0.21 -0.05 -0.18 -0.07 -0.15 -0.17 -0.10 -0.10 -0.08 -0.06 6 0.06 0.11 0.19 -0.10 -0.26 -0.14 -0.25 -0.25 -0.18 -0.18 -0.16 -0.09 7 0.07 0.10 0.22 -0.06 -0.28 -0.14 -0.25 -0.25 -0.18 -0.18 -0.16 -0.09 9 0.06 0.10 0.24 -0.08 -0.30 -0.25 -0.36 -0.42 -0.37 -0.38 -0.37 -0.30 10 0.06 0.10 0.24 -0.08 -0.30 -0.25 -0.14 -0.49 -0.44 -0.46 -0.48 -0.37 11 0.06 0.10 0.24 -0.08 -0.32 -0.19 -0.43 -0.49 -0.44 -0.46 -0.48 -0.37	2	0.36	0.91	1.44	1.57	1.73	1.87	1.90	1.94	1.97	1.98	1.99	1.99	
5 0.41 1.23 2.42 2.88 3.37 3.92 4.15 4.37 4.59 4.70 4.79 4.86 6 0.40 1.25 2.52 3.03 3.64 4.32 4.65 4.98 5.30 5.46 5.60 5.74 7 0.41 1.25 2.62 3.23 3.89 4.69 5.11 5.54 5.94 6.18 6.37 6.56 8 0.40 1.25 2.63 3.29 4.03 4.94 5.47 5.94 6.46 6.78 7.06 7.31 9 0.40 1.24 2.70 3.39 4.17 5.15 5.75 6.33 6.93 7.35 7.67 8.00 10 0.40 1.24 2.69 3.42 4.27 5.30 5.96 6.62 7.29 7.78 8.19 8.61 11 0.40 1.25 2.71 3.51 4.32 5.38 6.12 6.84 7.61 8.20 8.66 9.13 12 0.40 1.26 2.72 3.48 4.35 5.49 6.26 7.02 7.85 8.46 9.05 9.60  defender_deaths_mean, difference attackers 1 2 3 4 5 6 7 8 9 9 10 11 12  defenders  1 0.00 -0.00 -0.00 -0.02 -0.01 -0.00 -0.03 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 2 0.00 -0.01 -0.00 -0.09 -0.10 -0.03 -0.05 -0.03 -0.01 -0.01 -0.01 -0.00 3 0.06 0.06 0.12 -0.05 -0.11 -0.03 -0.07 -0.06 -0.02 -0.03 -0.02 -0.01 4 0.06 0.07 0.10 -0.10 -0.20 -0.07 -0.13 -0.12 -0.06 -0.02 -0.03 -0.03 5 0.07 0.09 0.21 -0.05 -0.18 -0.07 -0.15 -0.17 -0.10 -0.10 -0.08 -0.06 6 0.06 0.11 0.19 -0.10 -0.26 -0.14 -0.25 -0.25 -0.18 -0.18 -0.16 -0.09 7 0.07 0.10 0.22 -0.06 -0.28 -0.14 -0.25 -0.25 -0.18 -0.18 -0.16 -0.09 7 0.07 0.10 0.22 -0.06 -0.28 -0.14 -0.25 -0.25 -0.18 -0.18 -0.16 -0.09 9 0.06 0.10 0.24 -0.08 -0.32 -0.19 -0.33 -0.39 -0.30 -0.32 -0.22 -0.26 9 0.06 0.10 0.24 -0.08 -0.32 -0.19 -0.33 -0.49 -0.44 -0.46 -0.48 -0.37 10 0.06 0.10 0.24 -0.08 -0.32 -0.19 -0.43 -0.49 -0.44 -0.46 -0.48 -0.37	3	0.41	1.14	1.96	2.17	2.43	2.69	2.76	2.84	2.92	2.93	2.96	2.98	
6 0.40 1.25 2.52 3.03 3.64 4.32 4.65 4.98 5.30 5.46 5.60 5.74 7 0.41 1.25 2.62 3.23 3.89 4.69 5.11 5.54 5.94 6.18 6.37 6.56 8 0.40 1.25 2.63 3.29 4.03 4.94 5.47 5.94 6.46 6.78 7.06 7.31 9 0.40 1.24 2.70 3.39 4.17 5.15 5.75 6.33 6.93 7.35 7.67 8.00 10 0.40 1.24 2.69 3.42 4.27 5.30 5.96 6.62 7.29 7.78 8.19 8.61 11 0.40 1.25 2.71 3.51 4.32 5.38 6.12 6.84 7.61 8.20 8.66 9.13 12 0.40 1.26 2.72 3.48 4.35 5.49 6.26 7.02 7.85 8.46 9.05 9.60  defender_deaths_mean, diff=rence attackers 1 2 3 4 5 6 7 8 9 10 11 12  defenders  1 0.00 -0.00 -0.00 -0.02 -0.01 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 2 0.00 -0.01 -0.00 -0.09 -0.10 -0.03 -0.05 -0.03 -0.01 -0.01 -0.01 -0.00 3 0.06 0.06 0.12 -0.05 -0.11 -0.03 -0.05 -0.03 -0.01 -0.01 -0.01 -0.01 4 0.06 0.07 0.10 -0.10 -0.20 -0.07 -0.13 -0.12 -0.06 -0.07 -0.06 -0.03 5 0.07 0.09 0.21 -0.05 -0.18 -0.07 -0.15 -0.17 -0.10 -0.10 -0.08 -0.06 6 0.06 0.11 0.19 -0.10 -0.26 -0.14 -0.25 -0.25 -0.18 -0.18 -0.16 -0.09 7 0.07 0.10 0.22 -0.06 -0.28 -0.14 -0.28 -0.28 -0.22 -0.23 -0.22 -0.16 8 0.06 0.10 0.24 -0.08 -0.30 -0.20 -0.36 -0.42 -0.37 -0.38 -0.37 -0.30 10 0.06 0.10 0.24 -0.08 -0.32 -0.19 -0.43 -0.49 -0.44 -0.46 -0.48 -0.37 11 0.06 0.10 0.21 -0.05 -0.32 -0.19 -0.43 -0.49 -0.44 -0.46 -0.48 -0.37	4	0.40	1.17	2.18	2.52	2.91	3.33	3.49	3.64	3.79	3.84	3.89	3.94	
7 0.41 1.25 2.62 3.23 3.89 4.69 5.11 5.54 5.94 6.18 6.37 6.56 8 0.40 1.25 2.63 3.29 4.03 4.94 5.47 5.94 6.46 6.78 7.06 7.31 9 0.40 1.24 2.70 3.39 4.17 5.15 5.75 6.33 6.93 7.35 7.67 8.00 10 0.40 1.24 2.69 3.42 4.27 5.30 5.96 6.62 7.29 7.78 8.19 8.61 11 0.40 1.25 2.71 3.51 4.32 5.38 6.12 6.84 7.61 8.20 8.66 9.13 12 0.40 1.26 2.72 3.48 4.35 5.49 6.26 7.02 7.85 8.46 9.05 9.60  defender_deaths_mean, difference attackers 1 2 3 4 5 6 7 8 9 10 11 12  defenders  1 0.00 -0.00 -0.00 -0.02 -0.01 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 2 0.00 -0.01 -0.00 -0.09 -0.10 -0.03 -0.05 -0.03 -0.01 -0.01 -0.01 -0.01 3 0.06 0.06 0.12 -0.05 -0.11 -0.03 -0.05 -0.03 -0.01 -0.01 -0.01 -0.01 4 0.06 0.07 0.10 -0.10 -0.20 -0.07 -0.13 -0.12 -0.06 -0.07 -0.06 -0.03 5 0.07 0.09 0.21 -0.05 -0.18 -0.07 -0.15 -0.17 -0.10 -0.10 -0.08 -0.06 6 0.06 0.11 0.19 -0.10 -0.26 -0.14 -0.25 -0.25 -0.18 -0.18 -0.16 -0.09 7 0.07 0.10 0.22 -0.06 -0.28 -0.14 -0.28 -0.28 -0.22 -0.23 -0.22 -0.16 8 0.06 0.10 0.20 -0.09 -0.34 -0.17 -0.33 -0.39 -0.30 -0.32 -0.29 -0.22 9 0.06 0.10 0.24 -0.08 -0.30 -0.20 -0.36 -0.42 -0.37 -0.38 -0.37 -0.30 10 0.06 0.10 0.23 -0.05 -0.32 -0.19 -0.43 -0.49 -0.44 -0.46 -0.48 -0.37 11 0.06 0.10 0.21 -0.01 -0.03 -0.25 -0.44 -0.53 -0.50 -0.49 -0.44 -0.46 -0.48 -0.37	5	0.41	1.23	2.42	2.88	3.37	3.92	4.15	4.37	4.59	4.70	4.79	4.86	
8 0.40 1.25 2.63 3.29 4.03 4.94 5.47 5.94 6.46 6.78 7.06 7.31 9 0.40 1.24 2.70 3.39 4.17 5.15 5.75 6.33 6.93 7.35 7.67 8.00 10 0.40 1.24 2.69 3.42 4.27 5.30 5.96 6.62 7.29 7.78 8.19 8.61 11 0.40 1.25 2.71 3.51 4.32 5.38 6.12 6.84 7.61 8.20 8.66 9.13 12 0.40 1.26 2.72 3.48 4.35 5.49 6.26 7.02 7.85 8.46 9.05 9.60  defender_deaths_mean, difference attackers 1 2 3 4 5 6 7 8 9 10 11 12  defenders  1 0.00 -0.00 -0.00 -0.00 -0.02 -0.01 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 2 0.00 -0.01 -0.00 -0.09 -0.10 -0.03 -0.05 -0.03 -0.01 -0.01 -0.01 -0.00 3 0.06 0.06 0.12 -0.05 -0.11 -0.03 -0.05 -0.03 -0.12 -0.06 -0.07 -0.06 -0.03 5 0.07 0.09 0.21 -0.05 -0.18 -0.07 -0.15 -0.17 -0.10 -0.10 -0.08 -0.06 6 0.06 0.11 0.19 -0.10 -0.26 -0.14 -0.25 -0.25 -0.18 -0.18 -0.16 -0.09 7 0.07 0.10 0.22 -0.06 -0.28 -0.14 -0.25 -0.25 -0.18 -0.23 -0.22 -0.23 -0.22 -0.16 8 0.06 0.10 0.24 -0.08 -0.09 -0.34 -0.17 -0.33 -0.39 -0.30 -0.32 -0.22 -0.26 9 0.06 0.10 0.24 -0.08 -0.30 -0.20 -0.19 -0.43 -0.49 -0.44 -0.46 -0.48 -0.37 -0.30 10 0.06 0.10 0.21 -0.05 -0.32 -0.19 -0.43 -0.49 -0.44 -0.46 -0.48 -0.37 -0.30	6	0.40	1.25	2.52	3.03	3.64	4.32	4.65	4.98	5.30	5.46	5.60	5.74	
9 0.40 1.24 2.70 3.39 4.17 5.15 5.75 6.33 6.93 7.35 7.67 8.00 10 0.40 1.24 2.69 3.42 4.27 5.30 5.96 6.62 7.29 7.78 8.19 8.61 11 0.40 1.25 2.71 3.51 4.32 5.38 6.12 6.84 7.61 8.20 8.66 9.13 12 0.40 1.26 2.72 3.48 4.35 5.49 6.26 7.02 7.85 8.46 9.05 9.60  defender_deaths_mean, difference attackers 1 2 3 4 5 6 7 8 9 10 11 12  defenders  1 0.00 -0.00 -0.00 -0.02 -0.01 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 2 0.00 -0.01 -0.00 -0.09 -0.10 -0.03 -0.05 -0.03 -0.01 -0.01 -0.01 -0.01 3 0.06 0.06 0.12 -0.05 -0.11 -0.03 -0.07 -0.06 -0.02 -0.03 -0.02 -0.01 4 0.06 0.07 0.10 -0.10 -0.20 -0.07 -0.13 -0.12 -0.06 -0.07 -0.06 -0.03 5 0.07 0.09 0.21 -0.05 -0.18 -0.07 -0.15 -0.17 -0.10 -0.10 -0.08 -0.06 6 0.06 0.11 0.19 -0.10 -0.26 -0.14 -0.25 -0.25 -0.18 -0.18 -0.16 -0.09 7 0.07 0.10 0.22 -0.06 -0.28 -0.14 -0.28 -0.28 -0.22 -0.23 -0.22 -0.26 9 0.06 0.10 0.24 -0.08 -0.30 -0.20 -0.36 -0.42 -0.37 -0.38 -0.37 -0.30 10 0.06 0.10 0.23 -0.05 -0.32 -0.19 -0.43 -0.49 -0.44 -0.46 -0.48 -0.37 11 0.06 0.10 0.21 -0.05 -0.33 -0.25 -0.44 -0.53 -0.50 -0.49 -0.44 -0.46 -0.48 -0.37	7	0.41	1.25	2.62	3.23	3.89	4.69	5.11	5.54	5.94	6.18	6.37	6.56	
10 0.40 1.24 2.69 3.42 4.27 5.30 5.96 6.62 7.29 7.78 8.19 8.61  11 0.40 1.25 2.71 3.51 4.32 5.38 6.12 6.84 7.61 8.20 8.66 9.13  12 0.40 1.26 2.72 3.48 4.35 5.49 6.26 7.02 7.85 8.46 9.05 9.60  defender_deaths_mean, difference attackers 1 2 3 4 5 6 7 8 9 10 11 12  defenders  1 0.00 -0.00 -0.00 -0.02 -0.01 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00  2 0.00 -0.01 -0.00 -0.09 -0.10 -0.03 -0.05 -0.03 -0.01 -0.01 -0.01 -0.01  3 0.06 0.06 0.12 -0.05 -0.11 -0.03 -0.07 -0.06 -0.02 -0.03 -0.02 -0.01  4 0.06 0.07 0.10 -0.10 -0.20 -0.07 -0.13 -0.12 -0.06 -0.07 -0.06 -0.03  5 0.07 0.09 0.21 -0.05 -0.18 -0.07 -0.15 -0.17 -0.10 -0.10 -0.08 -0.06  6 0.06 0.11 0.19 -0.10 -0.26 -0.14 -0.25 -0.25 -0.18 -0.10 -0.08 -0.06  6 0.06 0.10 0.22 -0.06 -0.28 -0.14 -0.28 -0.28 -0.22 -0.23 -0.22 -0.16  8 0.06 0.10 0.24 -0.08 -0.08 -0.17 -0.33 -0.39 -0.30 -0.32 -0.29 -0.22  9 0.06 0.10 0.24 -0.08 -0.30 -0.20 -0.44 -0.46 -0.48 -0.37  10 0.06 0.10 0.23 -0.05 -0.32 -0.19 -0.43 -0.49 -0.44 -0.46 -0.48 -0.37  11 0.06 0.10 0.21 -0.01 -0.33 -0.25 -0.44 -0.53 -0.50 -0.49 -0.54 -0.50	8	0.40	1.25	2.63	3.29	4.03	4.94	5.47	5.94	6.46	6.78	7.06	7.31	
11 0.40 1.25 2.71 3.51 4.32 5.38 6.12 6.84 7.61 8.20 8.66 9.13  12 0.40 1.26 2.72 3.48 4.35 5.49 6.26 7.02 7.85 8.46 9.05 9.60  defender_deaths_mean, difference attackers 1 2 3 4 5 6 7 8 9 10 11 12  defenders  1 0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00 -0.00  2 0.00 -0.01 -0.00 -0.09 -0.10 -0.03 -0.05 -0.03 -0.01 -0.01 -0.01 -0.01 -0.00  3 0.06 0.06 0.12 -0.05 -0.11 -0.03 -0.07 -0.16 -0.02 -0.03 -0.02 -0.01  4 0.06 0.07 0.10 -0.10 -0.10 -0.20 -0.10 -0.15 -0.17 -0.10 -0.10 -0.08 -0.06  6 0.06 0.11 0.19 -0.10 -0.26 -0.14 -0.25 -0.25 -0.18 -0.18 -0.16 -0.09 7 0.07 0.10 0.22 -0.06 -0.28 -0.14 -0.28 -0.28 -0.22 -0.23 -0.22 -0.16  8 0.06 0.10 0.22 -0.08 -0.08 -0.28 -0.14 -0.28 -0.28 -0.22 -0.33 -0.37 -0.30 10 0.06 0.10 0.22 -0.05 -0.32 -0.25 -0.36 -0.42 -0.37 -0.38 -0.37 -0.30 10 0.06 0.10 0.22 -0.05 -0.32 -0.20 -0.20 -0.36 -0.42 -0.37 -0.38 -0.37 -0.30 10 0.06 0.10 0.22 -0.05 -0.32 -0.02 -0.19 -0.43 -0.49 -0.44 -0.46 -0.48 -0.37 11 0.06 0.10 0.21 -0.01 -0.01 -0.33 -0.25 -0.44 -0.53 -0.50 -0.49 -0.44 -0.46 -0.48 -0.37	9	0.40	1.24	2.70	3.39	4.17	5.15	5.75	6.33	6.93	7.35	7.67	8.00	
12  0.40  1.26  2.72  3.48  4.35  5.49  6.26  7.02  7.85  8.46  9.05  9.60  defender_deaths_mean, difference attackers  1  2  3  4  5  6  7  8  9  10  11  12  defenders  1  0.00  -0.00  -0.00  -0.02  -0.01  -0.00  -0.00  -0.00  -0.00  -0.00  -0.00  -0.00  -0.00  2  0.00  -0.01  -0.00  -0.09  -0.10  -0.03  -0.05  -0.03  -0.01  -0.01  -0.01  -0.00  3  0.06  0.06  0.12  -0.05  -0.11  -0.03  -0.07  -0.06  -0.02  -0.03  -0.02  -0.01  4  0.06  0.07  0.10  -0.10  -0.20  -0.07  -0.15  -0.17  -0.10  -0.10  -0.08  -0.06  6  0.06  0.11  0.19  -0.10  -0.26  -0.14  -0.25  -0.25  -0.18  -0.16  -0.09  7  0.07  0.10  0.22  -0.06  -0.28  -0.14  -0.25  -0.25  -0.18  -0.18  -0.16  -0.09  7  0.06  0.10  0.22  -0.06  -0.28  -0.14  -0.28  -0.22  -0.23  -0.22  -0.26  9  0.06  0.10  0.24  -0.08  -0.30  -0.20  -0.36  -0.42  -0.37  -0.38  -0.37  -0.30  10  0.06  0.10  0.23  -0.05  -0.32  -0.19  -0.43  -0.49  -0.44  -0.46  -0.48  -0.37  11  0.06  0.10  0.21  -0.01  -0.33  -0.25  -0.44  -0.53  -0.50  -0.49  -0.54  -0.50	10	0.40	1.24	2.69	3.42	4.27	5.30	5.96	6.62	7.29	7.78	8.19	8.61	
defender_deaths_mean, difference attackers 1 2 3 4 5 6 7 8 9 10 11 12 defenders  1 0.00 -0.00 -0.00 -0.02 -0.01 -0.00 -0	44	0.40	1 25	2.71	3.51	4.32	5.38	6.12	6.84	7.61	8.20	8.66	9.13	
attackers         1         2         3         4         5         6         7         8         9         10         11         12           defenders           1         0.00         -0.00         -0.00         -0.01         -0.00         -0.	11	0.40	1.25											
defenders           1         0.00         -0.00         -0.00         -0.01         -0.00				2.72	3.48	4.35	5.49	6.26	7.02	7.85	8.46	9.05	9.60	
1       0.00       -0.00       -0.00       -0.01       -0.00       -0.0	12	0.40	1.26					6.26	7.02	7.85	8.46	9.05	9.60	
2       0.00       -0.01       -0.00       -0.09       -0.10       -0.03       -0.05       -0.01       -0.01       -0.01       -0.00       -0.0	<b>12</b> defender	0.40 _deat	1.26 hs_me	ean, d	diffe	rence	9							12
3       0.06       0.06       0.12       -0.05       -0.11       -0.03       -0.07       -0.06       -0.02       -0.03       -0.02       -0.01         4       0.06       0.07       0.10       -0.10       -0.20       -0.07       -0.13       -0.12       -0.06       -0.07       -0.06       -0.03         5       0.07       0.09       0.21       -0.05       -0.18       -0.07       -0.15       -0.17       -0.10       -0.08       -0.06         6       0.06       0.11       0.19       -0.10       -0.26       -0.14       -0.25       -0.25       -0.18       -0.18       -0.16       -0.09         7       0.07       0.10       0.22       -0.06       -0.28       -0.14       -0.28       -0.28       -0.22       -0.23       -0.22       -0.16         8       0.06       0.10       0.20       -0.09       -0.34       -0.17       -0.33       -0.39       -0.30       -0.32       -0.22       -0.23       -0.22       -0.22         9       0.06       0.10       0.24       -0.08       -0.30       -0.20       -0.36       -0.42       -0.37       -0.38       -0.37       -0.30 <td< th=""><th>12 defender attackers</th><th>0.40 _deat</th><th>1.26 hs_me</th><th>ean, d</th><th>diffe</th><th>rence</th><th>9</th><th></th><th></th><th></th><th></th><th></th><th></th><th>12</th></td<>	12 defender attackers	0.40 _deat	1.26 hs_me	ean, d	diffe	rence	9							12
4       0.06       0.07       0.10       -0.10       -0.20       -0.07       -0.13       -0.12       -0.06       -0.07       -0.06       -0.03         5       0.07       0.09       0.21       -0.05       -0.18       -0.07       -0.15       -0.17       -0.10       -0.10       -0.08       -0.06         6       0.06       0.11       0.19       -0.10       -0.26       -0.14       -0.25       -0.25       -0.18       -0.18       -0.16       -0.09         7       0.07       0.10       0.22       -0.06       -0.28       -0.14       -0.28       -0.28       -0.22       -0.23       -0.22       -0.16         8       0.06       0.10       0.20       -0.09       -0.34       -0.17       -0.33       -0.39       -0.30       -0.32       -0.29       -0.22         9       0.06       0.10       0.24       -0.08       -0.30       -0.20       -0.36       -0.42       -0.37       -0.38       -0.37       -0.30         10       0.06       0.10       0.23       -0.05       -0.32       -0.19       -0.43       -0.49       -0.44       -0.46       -0.48       -0.50         11       0	12 defender attackers defenders	0.40 _deat 1	1.26 hs_me	ean, d	diffe	rence	e <b>5</b>	6	7	8	9	10	11	
5       0.07       0.09       0.21       -0.05       -0.18       -0.07       -0.15       -0.17       -0.10       -0.10       -0.08       -0.06         6       0.06       0.11       0.19       -0.10       -0.26       -0.14       -0.25       -0.25       -0.18       -0.18       -0.16       -0.09         7       0.07       0.10       0.22       -0.06       -0.28       -0.14       -0.28       -0.28       -0.22       -0.23       -0.22       -0.16         8       0.06       0.10       0.20       -0.09       -0.34       -0.17       -0.33       -0.39       -0.30       -0.32       -0.29       -0.22         9       0.06       0.10       0.24       -0.08       -0.30       -0.20       -0.36       -0.42       -0.37       -0.38       -0.37       -0.30         10       0.06       0.10       0.23       -0.05       -0.32       -0.19       -0.43       -0.49       -0.44       -0.46       -0.48       -0.50         11       0.06       0.10       0.21       -0.01       -0.33       -0.25       -0.44       -0.53       -0.50       -0.49       -0.54       -0.54       -0.50 <th>12 defender attackers defenders</th> <th>0.40 _deat _1</th> <th>1.26 hs_me 2 -0.00</th> <th>ean, o</th> <th>diffe</th> <th>rence 4 2 -0.0</th> <th>5 01 -0</th> <th>6</th> <th>7</th> <th>8</th> <th>9</th> <th><b>10</b> -0.00</th> <th><b>11</b> -0.00</th> <th>-0.00</th>	12 defender attackers defenders	0.40 _deat _1	1.26 hs_me 2 -0.00	ean, o	diffe	rence 4 2 -0.0	5 01 -0	6	7	8	9	<b>10</b> -0.00	<b>11</b> -0.00	-0.00
6       0.06       0.11       0.19       -0.10       -0.26       -0.14       -0.25       -0.25       -0.18       -0.18       -0.16       -0.09         7       0.07       0.10       0.22       -0.06       -0.28       -0.14       -0.28       -0.28       -0.22       -0.23       -0.22       -0.16         8       0.06       0.10       0.20       -0.09       -0.34       -0.17       -0.33       -0.39       -0.30       -0.32       -0.29       -0.22         9       0.06       0.10       0.24       -0.08       -0.30       -0.20       -0.36       -0.42       -0.37       -0.38       -0.37       -0.30         10       0.06       0.10       0.23       -0.05       -0.32       -0.19       -0.43       -0.49       -0.44       -0.46       -0.48       -0.37         11       0.06       0.10       0.21       -0.01       -0.33       -0.25       -0.44       -0.53       -0.50       -0.49       -0.54       -0.54       -0.50	defender attackers defenders 1	0.40 _deat _1 	1.26 hs_me 2 -0.00 -0.01 0.06	-0.00 -0.00 0.12	-0.09	rence 4 2 -0.0 9 -0.1 5 -0.1	5 01 -0 10 -0 11 -0	6 00 -( 03 -(	<b>7</b> 0.00 0.05 0.07	-0.00 -0.03 -0.06	9 -0.00 -0.01 -0.02	-0.00 -0.01 -0.03	-0.00 -0.01 -0.02	-0.00 -0.00
7       0.07       0.10       0.22       -0.06       -0.28       -0.14       -0.28       -0.28       -0.22       -0.23       -0.22       -0.16         8       0.06       0.10       0.20       -0.09       -0.34       -0.17       -0.33       -0.39       -0.30       -0.32       -0.29       -0.22         9       0.06       0.10       0.24       -0.08       -0.30       -0.20       -0.36       -0.42       -0.37       -0.38       -0.37       -0.30         10       0.06       0.10       0.23       -0.05       -0.32       -0.19       -0.43       -0.49       -0.44       -0.46       -0.48       -0.37         11       0.06       0.10       0.21       -0.01       -0.33       -0.25       -0.44       -0.53       -0.50       -0.49       -0.54       -0.50	defenders defenders 1 2	0.40 deat 1 0.00 0.00 0.06 0.06	1.26 hs_me 2 -0.00 -0.01 0.06 0.07	-0.00 -0.00 0.12	-0.02 -0.09 -0.09 -0.10	2 -0.0 9 -0.1 5 -0.2	20 -0 20 -0	6 .00 -( .03 -( .03 -(	7 0.00 0.05 0.07 0.13	-0.00 -0.03 -0.06 -0.12	9 -0.00 -0.01 -0.02 -0.06	-0.00 -0.01 -0.03 -0.07	-0.00 -0.01 -0.02 -0.06	-0.00 -0.00 -0.01
8       0.06       0.10       0.20       -0.09       -0.34       -0.17       -0.33       -0.39       -0.30       -0.32       -0.29       -0.22         9       0.06       0.10       0.24       -0.08       -0.30       -0.20       -0.36       -0.42       -0.37       -0.38       -0.37       -0.30         10       0.06       0.10       0.23       -0.05       -0.32       -0.19       -0.43       -0.49       -0.44       -0.46       -0.48       -0.37         11       0.06       0.10       0.21       -0.01       -0.33       -0.25       -0.44       -0.53       -0.50       -0.49       -0.54       -0.50	defenders defenders 1 2 3	0.40 deat 1 0.00 0.00 0.06 0.06	1.26 hs_me 2 -0.00 -0.01 0.06 0.07	-0.00 -0.00 0.12	-0.02 -0.09 -0.09 -0.10	2 -0.0 9 -0.1 5 -0.2	20 -0 20 -0	6 .00 -( .03 -( .03 -(	7 0.00 0.05 0.07 0.13	-0.00 -0.03 -0.06 -0.12	9 -0.00 -0.01 -0.02 -0.06	-0.00 -0.01 -0.03 -0.07	-0.00 -0.01 -0.02 -0.06	-0.00 -0.00 -0.01 -0.03
9       0.06       0.10       0.24       -0.08       -0.30       -0.20       -0.36       -0.42       -0.37       -0.38       -0.37       -0.30         10       0.06       0.10       0.23       -0.05       -0.32       -0.19       -0.43       -0.49       -0.44       -0.46       -0.48       -0.37         11       0.06       0.10       0.21       -0.01       -0.33       -0.25       -0.44       -0.53       -0.50       -0.49       -0.54       -0.50	defenders defenders  1 2 3 4 5	0.40 deat 1 0.00 0.00 0.06 0.06 0.07	1.26 hs_me 2 -0.00 -0.01 0.06 0.07 0.09	-0.00 -0.00 0.12 0.10	-0.00 -0.00 -0.00 -0.10 -0.00	2 -0.0 9 -0.1 5 -0.2 5 -0.1	20 -0 118 -0	6 .00 -( .03 -( .03 -( .07 -(	7 0.00 0.05 0.07 0.13	-0.00 -0.03 -0.06 -0.12 -0.17	9 -0.00 -0.01 -0.02 -0.06 -0.10	-0.00 -0.01 -0.03 -0.07 -0.10	-0.00 -0.01 -0.02 -0.06 -0.08	-0.00 -0.00 -0.01 -0.03 -0.06
10       0.06       0.10       0.23       -0.05       -0.32       -0.19       -0.43       -0.49       -0.44       -0.46       -0.48       -0.37         11       0.06       0.10       0.21       -0.01       -0.33       -0.25       -0.44       -0.53       -0.50       -0.49       -0.54       -0.50	defenders defenders  1 2 3 4 5	0.40 deat 1 0.00 0.00 0.06 0.06 0.07 0.06	1.26 hs_me 2 -0.00 -0.01 0.06 0.07 0.09 0.11 0.10	-0.000 -0.000 0.12 0.10 0.21 0.19	-0.00 -0.00 -0.00 -0.10 -0.10 -0.10	2 -0.0 9 -0.1 5 -0.2 5 -0.2 6 -0.2	20 -0 11 -0 20 -0 18 -0 26 -0	6 .00 -( .03 -( .07 -( .07 -( .14 -(	7 0.00 0.05 0.07 0.13 0.15 0.25	8 -0.00 -0.03 -0.06 -0.12 -0.17 -0.25 -0.28	9 -0.00 -0.01 -0.02 -0.06 -0.10 -0.18	-0.00 -0.01 -0.03 -0.07 -0.10	-0.00 -0.01 -0.02 -0.06 -0.08	-0.00 -0.00 -0.01 -0.03 -0.06
<b>11</b> 0.06 0.10 0.21 -0.01 -0.33 -0.25 -0.44 -0.53 -0.50 -0.49 -0.54 -0.50	defender attackers defenders 1 2 3 4 5 6	0.40 deat 1 0.00 0.00 0.06 0.06 0.07 0.06 0.07	1.26 hs_me 2 -0.00 -0.01 0.06 0.07 0.09 0.11 0.10 0.10	-0.000 -0.000 0.12 0.10 0.21 0.19	-0.00 -0.00 -0.00 -0.10 -0.10 -0.10	2 -0.0 9 -0.1 5 -0.2 5 -0.2 6 -0.2	20 -0 11 -0 20 -0 18 -0 26 -0 28 -0	6 00 -0 03 -0 03 -0 07 -0 14 -0 14 -0	7 0.00 0.05 0.07 0.13 0.15 0.25	8 -0.00 -0.03 -0.06 -0.12 -0.17 -0.25 -0.28	9 -0.00 -0.01 -0.02 -0.06 -0.10 -0.18 -0.22	-0.00 -0.01 -0.03 -0.07 -0.10 -0.18 -0.23	-0.00 -0.01 -0.02 -0.06 -0.08 -0.16 -0.22	-0.00 -0.00 -0.01 -0.03 -0.06 -0.09
	defender attackers defenders 1 2 3 4 5 6 7	0.40 deat 1 0.00 0.00 0.06 0.06 0.07 0.06 0.07	1.26 hs_me 2 -0.00 -0.01 0.06 0.07 0.09 0.11 0.10 0.10	-0.000 -0.000 0.12 0.10 0.21 0.19 0.22	-0.00 -0.00 -0.00 -0.10 -0.10 -0.00 -0.00	2 -0.0 9 -0.1 5 -0.2 5 -0.2 6 -0.2 9 -0.3	01 -0 10 -0 11 -0 20 -0 18 -0 26 -0 28 -0	6  00 -( 03 -( 03 -( 07 -( 07 -( 14 -( 14 -( 17 -(	7 0.00 0.05 0.07 0.13 0.15 0.25 0.28	8 -0.00 -0.03 -0.06 -0.12 -0.17 -0.25 -0.28 -0.39	9 -0.00 -0.01 -0.02 -0.06 -0.10 -0.18 -0.22 -0.30	-0.00 -0.01 -0.03 -0.07 -0.10 -0.18 -0.23 -0.32	-0.00 -0.01 -0.02 -0.06 -0.08 -0.16 -0.22 -0.29	-0.00 -0.01 -0.03 -0.06 -0.09 -0.16
<b>12</b> 0.05 0.11 0.25 -0.07 -0.35 -0.24 -0.42 -0.60 -0.54 -0.65 -0.64 -0.57	defender attackers defenders 1 2 3 4 5 6 7 8	0.40 deat 1 0.00 0.00 0.06 0.06 0.07 0.06 0.07 0.06 0.06	1.26 hs_me 2 -0.00 -0.01 0.06 0.07 0.09 0.11 0.10 0.10	-0.000 -0.000 0.12 0.10 0.21 0.19 0.22 0.20 0.24	-0.00 -0.00 -0.00 -0.10 -0.10 -0.00 -0.00 -0.00	2 -0.0 9 -0.1 5 -0.1 0 -0.2 6 -0.2 8 -0.3	01 -0 10 -0 11 -0 20 -0 18 -0 26 -0 28 -0 34 -0	6  00 -( 03 -( 03 -( 07 -( 07 -( 14 -( 14 -( 17 -( 20 -(	7 0.00 0.05 0.07 0.13 0.15 0.25 0.28 0.33	8 -0.00 -0.03 -0.06 -0.12 -0.17 -0.25 -0.28 -0.39 -0.42	9 -0.00 -0.01 -0.02 -0.06 -0.10 -0.18 -0.22 -0.30 -0.37	-0.00 -0.01 -0.03 -0.07 -0.10 -0.18 -0.23 -0.32 -0.38	-0.00 -0.01 -0.02 -0.06 -0.08 -0.16 -0.22 -0.29 -0.37	-0.00 -0.01 -0.03 -0.06 -0.09 -0.16 -0.22 -0.30
	defenders attackers defenders  1 2 3 4 5 6 7 8 9	0.40 deat 1 0.00 0.00 0.06 0.06 0.07 0.06 0.07 0.06 0.06	1.26 hs_me 2 -0.00 -0.01 0.06 0.07 0.09 0.11 0.10 0.10 0.10	-0.00 -0.00 0.12 0.10 0.21 0.22 0.20 0.24 0.23	-0.00 -0.00 -0.00 -0.10 -0.00 -0.00 -0.00 -0.00	rence 4  2	20 -0 11 -0 20 -0 18 -0 26 -0 34 -0 30 -0	6  00 -( 03 -( 03 -( 07 -( 07 -( 14 -( 17 -( 20 -( 19 -(	7 0.00 0.05 0.07 0.13 0.15 0.25 0.28 0.33 0.36	8 -0.00 -0.03 -0.06 -0.12 -0.17 -0.25 -0.28 -0.39 -0.42 -0.49	9 -0.00 -0.01 -0.02 -0.06 -0.10 -0.22 -0.30 -0.37 -0.44	-0.00 -0.01 -0.03 -0.10 -0.18 -0.23 -0.32 -0.38 -0.46	-0.00 -0.01 -0.02 -0.06 -0.08 -0.16 -0.22 -0.29 -0.37 -0.48	-0.00 -0.00 -0.01 -0.03 -0.06 -0.09 -0.16 -0.22 -0.30

file:///home/trevormaxjs/Downloads/Risk.html

 ${\tt defender\_deaths\_std, standard}$ 

attackers	1	2	3	4	5	6	7	8	9	10	11	12
defenders												
1	0.49	0.43	0.27	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00
2	0.67	0.90	0.82	0.70	0.52	0.41	0.29	0.23	0.17	0.13	0.09	0.07
3	0.68	1.17	1.23	1.13	0.92	0.75	0.59	0.46	0.35	0.28	0.21	0.16
4	0.68	1.29	1.56	1.50	1.32	1.13	0.92	0.75	0.59	0.46	0.36	0.28
5	0.68	1.38	1.80	1.85	1.70	1.53	1.30	1.09	0.89	0.72	0.59	0.45
6	0.67	1.41	2.00	2.12	2.05	1.91	1.69	1.45	1.22	1.01	0.84	0.68
7	0.67	1.44	2.12	2.35	2.35	2.27	2.05	1.84	1.59	1.35	1.13	0.93
8	0.68	1.45	2.23	2.53	2.62	2.57	2.42	2.21	1.96	1.72	1.47	1.25
9	0.68	1.46	2.29	2.67	2.83	2.86	2.74	2.58	2.32	2.07	1.82	1.57
10	0.68	1.46	2.33	2.77	2.99	3.09	3.05	2.90	2.71	2.46	2.19	1.95
11	0.67	1.46	2.38	2.85	3.15	3.30	3.30	3.21	3.04	2.83	2.58	2.29
12	0.68	1.48	2.40	2.90	3.26	3.45	3.52	3.48	3.36	3.17	2.93	2.66
defender_	_deat	hs_st	td, t	able								
defender attackers	_deat 1	hs_s1 <b>2</b>	td, t 3	able 4	5	6	7	8	9	10	11	12
-	_	_	•		5	6	7	8	9	10	11	12
attackers	_	_	•		0.14	0.08	<b>7</b>	0.04	<b>9</b>	0.02	0.01	0.01
attackers defenders	1	0.43 0.90	0.28 0.82	0.21 0.76		0.08 0.46	0.07 0.41	0.04 0.32	0.02		0.01 0.15	
attackers defenders	0.49 0.67 0.80	0.43 0.90 1.21	0.28	0.21 0.76 1.17	0.14	0.08 0.46 0.79	0.07 0.41 0.70	0.04	0.02 0.22 0.42	0.02 0.19 0.37	0.01 0.15 0.30	0.01
attackers defenders  1 2 3 4	0.49 0.67 0.80 0.79	0.43 0.90	0.28 0.82	0.21 0.76	0.14 0.63	0.08 0.46 0.79 1.16	0.07 0.41	0.04 0.32 0.57 0.90	0.02 0.22 0.42 0.69	0.02 0.19 0.37 0.62	0.01 0.15	0.01 0.10
attackers defenders  1 2 3	0.49 0.67 0.80 0.79	0.43 0.90 1.21 1.32 1.46	0.28 0.82 1.23 1.54 1.86	0.21 0.76 1.17 1.53	0.14 0.63 1.01 1.41 1.79	0.08 0.46 0.79 1.16 1.55	0.07 0.41 0.70 1.06 1.44	0.04 0.32 0.57 0.90 1.27	0.02 0.22 0.42 0.69 1.02	0.02 0.19 0.37 0.62 0.89	0.01 0.15 0.30 0.51 0.75	0.01 0.10 0.21 0.39 0.60
attackers defenders  1 2 3 4 5	0.49 0.67 0.80 0.79 0.82 0.81	0.43 0.90 1.21 1.32 1.46 1.49	3 0.28 0.82 1.23 1.54 1.86 2.02	0.21 0.76 1.17 1.53 1.90 2.16	0.14 0.63 1.01 1.41 1.79 2.12	0.08 0.46 0.79 1.16 1.55	0.07 0.41 0.70 1.06 1.44	0.04 0.32 0.57 0.90 1.27	0.02 0.22 0.42 0.69 1.02	0.02 0.19 0.37 0.62 0.89	0.01 0.15 0.30 0.51 0.75	0.01 0.10 0.21 0.39 0.60 0.85
attackers defenders  1 2 3 4 5 6 7	0.49 0.67 0.80 0.79 0.82 0.81	0.43 0.90 1.21 1.32 1.46 1.49	3 0.28 0.82 1.23 1.54 1.86 2.02 2.20	0.21 0.76 1.17 1.53 1.90 2.16	0.14 0.63 1.01 1.41 1.79 2.12 2.43	0.08 0.46 0.79 1.16 1.55 1.92 2.27	0.07 0.41 0.70 1.06 1.44 1.83 2.21	0.04 0.32 0.57 0.90 1.27 1.64 2.01	0.02 0.22 0.42 0.69 1.02 1.38	0.02 0.19 0.37 0.62 0.89 1.25	0.01 0.15 0.30 0.51 0.75 1.07	0.01 0.10 0.21 0.39 0.60 0.85 1.16
attackers defenders  1 2 3 4 5 6 7	0.49 0.67 0.80 0.79 0.82 0.81 0.82	0.43 0.90 1.21 1.32 1.46 1.49 1.53	3 0.28 0.82 1.23 1.54 1.86 2.02 2.20 2.29	0.21 0.76 1.17 1.53 1.90 2.16 2.43 2.58	0.14 0.63 1.01 1.41 1.79 2.12 2.43 2.65	0.08 0.46 0.79 1.16 1.55 1.92 2.27	0.07 0.41 0.70 1.06 1.44 1.83 2.21 2.54	0.04 0.32 0.57 0.90 1.27 1.64 2.01	0.02 0.22 0.42 0.69 1.02 1.38 1.75	0.02 0.19 0.37 0.62 0.89 1.25 1.58	0.01 0.15 0.30 0.51 0.75 1.07 1.41	0.01 0.10 0.21 0.39 0.60 0.85 1.16
attackers defenders  1 2 3 4 5 6 7 8	0.49 0.67 0.80 0.79 0.82 0.81 0.82 0.82	0.43 0.90 1.21 1.32 1.46 1.49 1.53 1.54	3 0.28 0.82 1.23 1.54 1.86 2.02 2.20 2.29 2.39	0.21 0.76 1.17 1.53 1.90 2.16 2.43 2.58 2.72	0.14 0.63 1.01 1.41 1.79 2.12 2.43 2.65 2.87	0.08 0.46 0.79 1.16 1.55 1.92 2.27 2.57 2.84	0.07 0.41 0.70 1.06 1.44 1.83 2.21 2.54 2.86	0.04 0.32 0.57 0.90 1.27 1.64 2.01 2.39	0.02 0.22 0.42 0.69 1.02 1.38 1.75 2.12	0.02 0.19 0.37 0.62 0.89 1.25 1.58 1.97	0.01 0.15 0.30 0.51 0.75 1.07 1.41 1.76	0.01 0.10 0.21 0.39 0.60 0.85 1.16 1.51
attackers defenders  1 2 3 4 5 6 7 8 9 10	0.49 0.67 0.80 0.79 0.82 0.81 0.82 0.82 0.82	0.43 0.90 1.21 1.32 1.46 1.49 1.53 1.54 1.55	3 0.28 0.82 1.23 1.54 1.86 2.02 2.20 2.29 2.39 2.42	0.21 0.76 1.17 1.53 1.90 2.16 2.43 2.58 2.72 2.83	0.14 0.63 1.01 1.41 1.79 2.12 2.43 2.65 2.87 3.02	0.08 0.46 0.79 1.16 1.55 1.92 2.27 2.57 2.84 3.05	0.07 0.41 0.70 1.06 1.44 1.83 2.21 2.54 2.86 3.12	0.04 0.32 0.57 0.90 1.27 1.64 2.01 2.39 2.74	0.02 0.22 0.42 0.69 1.02 1.38 1.75 2.12 2.49	0.02 0.19 0.37 0.62 0.89 1.25 1.58 1.97 2.33	0.01 0.15 0.30 0.51 0.75 1.07 1.41 1.76 2.14	0.01 0.10 0.21 0.39 0.60 0.85 1.16 1.51 1.86
attackers defenders  1 2 3 4 5 6 7 8	0.49 0.67 0.80 0.79 0.82 0.81 0.82 0.82	0.43 0.90 1.21 1.32 1.46 1.49 1.53 1.54	3 0.28 0.82 1.23 1.54 1.86 2.02 2.20 2.29 2.39	0.21 0.76 1.17 1.53 1.90 2.16 2.43 2.58 2.72	0.14 0.63 1.01 1.41 1.79 2.12 2.43 2.65 2.87	0.08 0.46 0.79 1.16 1.55 1.92 2.27 2.57 2.84	0.07 0.41 0.70 1.06 1.44 1.83 2.21 2.54 2.86	0.04 0.32 0.57 0.90 1.27 1.64 2.01 2.39	0.02 0.22 0.42 0.69 1.02 1.38 1.75 2.12	0.02 0.19 0.37 0.62 0.89 1.25 1.58 1.97	0.01 0.15 0.30 0.51 0.75 1.07 1.41 1.76	0.01 0.10 0.21 0.39 0.60 0.85 1.16 1.51

defender\_deaths\_std, difference

							K	isk							
attackers	1	2	3	4	5	6	7	8	9	10	11	12			
defenders															
1	0.00	0.00	0.01	0.05	0.05	0.02	0.03	0.02	0.01	0.01	0.01	0.01			
2	-0.00	0.00	0.00	0.06	0.11	0.05	0.12	0.09	0.06	0.07	0.05	0.03			
3	0.12	0.04	0.00	0.05	0.10	0.03	0.11	0.12	0.07	0.09	0.09	0.06			
4	0.11	0.04	-0.02	0.03	0.08	0.03	0.14	0.15	0.10	0.16	0.16	0.10			
5	0.14	0.08	0.06	0.05	0.09	0.02	0.14	0.17	0.13	0.17	0.16	0.15			
6	0.14	0.08	0.01	0.04	0.06	0.01	0.14	0.19	0.16	0.24	0.24	0.17			
7	0.15	0.09	0.08	0.08	0.07	0.00	0.15	0.17	0.17	0.23	0.28	0.23			
8	0.15	0.09	0.05	0.05	0.02	-0.00	0.12	0.19	0.16	0.25	0.30	0.25			
9	0.14	0.10	0.10	0.05	0.05	-0.02	0.12	0.15	0.17	0.25	0.32	0.29			
10	0.14	0.09	0.09	0.05	0.03	-0.04	0.07	0.14	0.13	0.24	0.31	0.28			
11	0.14	0.10	0.09	0.10	0.01	-0.05	0.08	0.12	0.12	0.21	0.30	0.33			
12	0.14	0.10	0.10	0.08	-0.01	-0.06	0.03	0.09	0.07	0.21	0.29	0.30			
attacker_	_wins_	_mean,	star	ndard											<b>\$</b>
attackers	1	2	;	3	4	5	6	7	8	ę	)	10	11	12	
attackers defenders	1	2	;	3	4	5	6	7	8	ę	)	10	11	12	
	41.92	75.56	91.8				99.66	99.87	99.96	99.98			<b>11</b> 100.00	100.00	
defenders 1 2	41.92 10.64	75.56 36.45		5 97. 7 78.	10 99 58 88	9.03 9 3.95 9	99.66 93.47	99.87 96.71	99.96 97.99		3 100				
defenders	41.92 10.64 2.63	75.56 36.45 20.80	91.8	5 97. 7 78.	10 99 58 88	9.03 S 3.95 S 5.96 8	99.66 93.47 35.75	99.87 96.71 90.88	99.96 97.99 94.74	99.98 99.00 96.66	3 100 ) 99 6 98	0.00	100.00	100.00 99.81 99.33	
defenders  1 2 3 4	41.92 10.64 2.63 0.69	75.56 36.45 20.80 9.21	91.85 65.87 47.33 31.66	5 97. 7 78. 7 63. 6 47.	10 99 58 88 87 76 12 63	9.03 9 3.95 9 5.96 8	99.66 93.47 85.75 74.47	99.87 96.71 90.88 83.21	99.96 97.99 94.74 88.91	99.98 99.00 96.66 92.89	3 100 ) 99 6 98 9 95	).00 ).41	100.00 99.71 98.83 97.16	100.00 99.81	
defenders  1 2 3	41.92 10.64 2.63 0.69 0.23	75.56 36.45 20.80 9.21 4.89	91.88 65.8 47.3 31.66 20.24	5 97. 7 78. 7 63. 6 47. 4 35.	10 99 58 88 87 76 12 63 86 50	0.03 9 3.95 9 5.96 8 3.73 7	99.66 93.47 85.75 74.47	99.87 96.71 90.88 83.21 73.35	99.96 97.99 94.74 88.91 81.91	99.98 99.00 96.66 92.89 87.16	3 100 9 99 6 98 9 95 6 91	0.00 0.41 3.06 5.57	100.00 99.71 98.83 97.16 94.22	100.00 99.81 99.33 98.23 96.45	
1 2 3 4 5 6	41.92 10.64 2.63 0.69 0.23 0.05	75.56 36.45 20.80 9.21 4.89 2.11	91.88 65.8 47.3 31.66 20.24 13.69	5 97. 7 78. 7 63. 6 47. 4 35. 9 25.	10 99 58 88 87 76 12 63 86 50 11 39	0.03 9 3.95 9 5.96 8 3.73 7 0.46 6 0.37 5	99.66 93.47 85.75 74.47 63.74	99.87 96.71 90.88 83.21 73.35 63.61	99.96 97.99 94.74 88.91 81.91 72.89	99.98 99.00 96.66 92.89 87.16 80.75	3 100 9 99 6 98 9 95 6 91 5 86	0.00 0.41 3.06 5.57 82	100.00 99.71 98.83 97.16 94.22 90.52	100.00 99.81 99.33 98.23 96.45 93.24	
defenders  1 2 3 4 5 6 7	41.92 10.64 2.63 0.69 0.23 0.05 0.02	75.56 36.45 20.80 9.21 4.89 2.11 1.13	91.85 65.8 47.3 31.66 20.24 13.65 8.34	5 97. 7 78. 7 63. 6 47. 4 35. 9 25. 4 17.	10 99 58 88 87 76 12 63 86 50 .11 39 93 29	9.03 9 3.95 9 5.96 8 3.73 7 9.46 6 9.37 5	99.66 93.47 85.75 74.47 63.74 52.18	99.87 96.71 90.88 83.21 73.35 63.61 53.31	99.96 97.99 94.74 88.91 81.91 72.89 64.23	99.98 99.00 96.66 92.89 87.16 80.75 72.76	3 100 9 99 6 98 9 95 6 91 5 86	0.00 0.41 3.06 5.57 82 6.18 0.94	100.00 99.71 98.83 97.16 94.22 90.52 85.21	100.00 99.81 99.33 98.23 96.45 93.24 89.79	
defenders  1 2 3 4 5 6 7 8	41.92 10.64 2.63 0.69 0.23 0.05 0.02	75.56 36.45 20.80 9.21 4.89 2.11 1.13 0.47	91.83 65.83 47.33 31.66 20.24 13.69 8.34 5.42	5 97. 7 78. 7 63. 6 47. 4 35. 9 25. 4 17.	10 99 58 88 87 76 12 63 86 50 11 39 93 29 30 22	9.03	99.66 93.47 85.75 74.47 63.74 52.18 42.34 32.53	99.87 96.71 90.88 83.21 73.35 63.61 53.31 44.42	99.96 97.99 94.74 88.91 81.91 72.89 64.23 54.98	99.98 99.00 96.66 92.89 87.16 80.75	3 100 9 99 6 98 9 95 6 91 5 86	0.00 0.41 3.06 5.57 82	100.00 99.71 98.83 97.16 94.22 90.52	100.00 99.81 99.33 98.23 96.45 93.24	
defenders  1 2 3 4 5 6 7 8 9	41.92 10.64 2.63 0.69 0.23 0.05 0.02 0.00	75.56 36.45 20.80 9.21 4.89 2.11 1.13 0.47 0.25	91.83 65.8° 47.3° 31.66 20.24 13.69 8.34 5.44 3.32	5 97. 7 78. 7 63. 6 47. 4 35. 9 25. 4 17. 2 12.	10 99 58 88 87 76 12 63 86 50 11 39 93 29 30 22 60 16	9.03 § 3.95 § 3.96 § 3.73 7 9.46 € 9.37 § 3.998 4 2.75 3 6.12 2	99.66 93.47 85.75 74.47 63.74 62.18 42.34 82.53	99.87 96.71 90.88 83.21 73.35 63.61 53.31 44.42 35.68	99.96 97.99 94.74 88.91 81.91 72.89 64.23 54.98	99.98 99.00 96.66 92.89 87.16 80.75 72.76 64.63	3 100 9 99 6 98 9 95 6 91 6 86 79 3 72	0.00 0.41 3.06 5.57 82 6.18 0.94 2.66	100.00 99.71 98.83 97.16 94.22 90.52 85.21 79.35	100.00 99.81 99.33 98.23 96.45 93.24 89.79 84.48 79.02	
defenders  1 2 3 4 5 6 7 8	41.92 10.64 2.63 0.69 0.23 0.05 0.02	75.56 36.45 20.80 9.21 4.89 2.11 1.13 0.47	91.88 65.8° 47.3° 31.66 20.24 13.69 8.34 5.42 3.33 2.08	5 97. 7 78. 7 63. 6 47. 4 35. 9 25. 4 17. 2 12. 2 8. 8 5.	10 99 58 88 87 76 12 63 86 50 11 39 93 29 30 22 60 16	9.03 § 3.95 § 3.96 § 3.73 7 9.46 € 9.37 § 3.998 4 2.75 3 6.12 2	99.66 93.47 85.75 74.47 63.74 52.18 42.34 32.53	99.87 96.71 90.88 83.21 73.35 63.61 53.31 44.42	99.96 97.99 94.74 88.91 81.91 72.89 64.23 54.98	99.98 99.00 96.66 92.89 87.16 80.75 72.76 64.63	3 100 9 99 6 98 9 95 6 91 6 86 79 3 72	0.00 0.41 3.06 5.57 82 6.18 0.94	100.00 99.71 98.83 97.16 94.22 90.52 85.21 79.35	100.00 99.81 99.33 98.23 96.45 93.24 89.79 84.48	
defenders  1 2 3 4 5 6 7 8 9	41.92 10.64 2.63 0.69 0.23 0.05 0.02 0.00	75.56 36.45 20.80 9.21 4.89 2.11 1.13 0.47 0.25	91.89 65.8° 47.3° 31.66° 20.24° 13.69° 8.34° 5.42° 3.33° 2.08°	5 97. 7 78. 7 63. 6 47. 4 35. 9 25. 4 17. 2 12. 2 8. 8 5.	10 99 58 88 87 76 12 63 86 50 11 39 93 29 30 22 60 16 67 11	9.03	99.66 93.47 85.75 74.47 63.74 62.18 42.34 82.53	99.87 96.71 90.88 83.21 73.35 63.61 53.31 44.42 35.68	99.96 97.99 94.74 88.91 81.91 72.89 64.23 54.98	99.98 99.00 96.66 92.89 87.16 80.75 72.76 64.63 56.04 48.03	3 100 9 99 6 98 9 95 6 91 6 86 7 9 8 65 8 72 8 72	0.00 0.41 3.06 5.57 82 6.18 0.94 2.66	100.00 99.71 98.83 97.16 94.22 90.52 85.21 79.35	100.00 99.81 99.33 98.23 96.45 93.24 89.79 84.48 79.02	
defenders  1 2 3 4 5 6 7 8 9 10	41.92 10.64 2.63 0.69 0.23 0.05 0.02 0.00 0.00	75.56 36.45 20.80 9.21 4.89 2.11 1.13 0.47 0.25 0.11	91.88 65.8° 47.3° 31.66 20.24 13.69 8.34 5.42 3.33 2.08	5 97. 7 78. 7 63. 6 47. 4 35. 9 25. 4 17. 2 12. 8 8. 8 5.	10 99 58 88 87 76 12 63 86 50 11 39 93 29 30 22 60 16 67 11 76 8	9.03 9 3.95 9 3.96 8 3.73 7 9.98 4 9.98 4 9.98 4 2.75 3 6.12 2 1.67 1 3.48 1	99.66 93.47 35.75 74.47 63.74 652.18 42.34 32.53 25.95	99.87 96.71 90.88 83.21 73.35 63.61 53.31 44.42 35.68 29.16	99.96 97.99 94.74 88.91 81.91 72.89 64.23 54.98 46.57 38.07	99.98 99.00 96.66 92.89 87.16 80.75 72.76 64.63 56.04	3 100 9 99 6 98 9 95 6 91 6 86 7 9 8 65 8 72 8 72	0.00 0.41 3.06 5.57 82 6.18 0.94 2.66 6.26 6.83	100.00 99.71 98.83 97.16 94.22 90.52 85.21 79.35 72.07 65.33	100.00 99.81 99.33 98.23 96.45 93.24 89.79 84.48 79.02 72.30	

							Risk							
attackers	1	2	3	4	1	5	6	7	8	9	10	11	12	
defenders														
1	41.94	75.40	91.51	95.21	1 97.8	9 99.3	34 99	9.56	99.85	99.94	99.97	99.98	99.99	
2	10.60	36.07	65.79	73.20	82.8	8 91.5	50 93	3.32	96.02	98.12	98.47	99.09	99.63	
3	4.53	22.54	52.05	62.53	72.6	8 84.0	06 87	7.97	91.69	95.37	96.45	97.66	98.70	
4	1.07	9.79	32.32	43.99	55.4	5 70.3	36 77	7.65	83.46	89.61	92.28	94.46	96.70	
5	0.48	5.80	24.49	35.70	46.6	5 60.4	43 68	3.87	75.85	83.25	87.76	90.82	93.80	
6	0.14	2.32	14.17	23.61	33.6	8 47.0	02 56	5.66	65.34	74.25	80.27	84.75	89.50	
7	0.06	1.40	10.22	18.72	2 26.8	5 38.4	44 48	3.18	57.27	66.46	73.34	78.73	84.38	
8	0.02	0.56	5.54	11.66	18.5	0 28.7	76 38	3.21	46.94	56.67	64.38	71.50	77.77	
9	0.01	0.33	4.12	8.72	2 14.5	3 22.8	35 31	L.27	39.78	48.85	57.23	64.16	71.07	
10	0.00	0.12	2.20	5.48	9.9	2 16.5	54 23	3.77	31.56	40.03	48.46	55.74	63.79	
11	0.00	0.07	1.52	4.23	3 7.4	5 12.5	58 19	9.05	25.73	33.56	41.77	48.89	56.12	
12	0.00	0.04	0.84	2.42	2 4.9	3 9.0	02 13	3.95	19.92	26.65	33.99	41.46	48.91	
attacker_														4
attackers	1	2	3	4	5	6	7		8	9 1	.0 11	L 12		
defenders														
1	0.02	-0.15	-0.34	-1.89	-1.13	-0.32	-0.31							
2	-0.05	-0.39	-0.08	-5.39	-6.07	-1.96	-3.40							
3	1.90	1.73	4.68	-1.34	-4.28	-1.69	-2.92							
5	0.38	0.58	0.66 4.25	-3.13 -0.16	-8.28 -3.81	-4.11 -3.32	-5.57 -4.49	-5.4 -6.0						
6	0.23										17 -5.41			
7	0.05	0.21	1.88	0.79	-3.13	-3.90	-5.13	-6.9						
8	0.03	0.27		-0.64	-4.25	-3.77	-6.21							
9	0.01	0.08	0.80	0.12	-1.59	-3.09	-4.40							
10	0.00	0.01		-0.19	-1.74	-2.69	-5.39	-6.						
11	0.00	-0.01	0.27	0.48	-1.03	-2.19	-3.09							
	0.00	0.01	01	0.10	1.00		0.00	J	.5 0.0		0.00	3.00		
12	0.00	0.01	0.01	-0.03	-1.09	-1.76	-3.24	-5.0	02 -6.8	37 -8.1	1 -9.26	-9.53		
<b>12</b> attacker	0.00 wins	0.01		-0.03 ard	-1.09	-1.76	-3.24	-5.0	02 -6.8	.8.1	-9.26	6 -9.53		

							Risk					
attackers	1	2	3	4	5	6	7	8	9	10	11	12
defenders												
1	49.34	42.98	27.36	16.79	9.82	5.80	3.60	1.95	1.26	0.63	0.45	0.00
2	30.84	48.13	47.41	41.02	31.35	24.71	17.83	14.03	9.93	7.66	5.41	4.33
3	16.00	40.59	49.93	48.04	42.11	34.96	28.78	22.32	17.96	13.78	10.74	8.17
4	8.28	28.91	46.52	49.92	48.08	43.60	37.37	31.41	25.69	20.57	16.62	13.17
5	4.77	21.57	40.18	47.96	50.00	48.07	44.21	38.49	33.46	27.40	23.33	18.51
6	2.19	14.37	34.37	43.36	48.86	49.95	48.11	44.45	39.43	34.51	29.30	25.10
7	1.26	10.59	27.65	38.36	45.82	49.41	49.89	47.93	44.52	40.04	35.50	30.28
8	0.45	6.84	22.65	32.84	41.92	46.85	49.69	49.75	47.81	44.57	40.48	36.21
9	0.00	4.95	17.91	28.04	36.77	43.83	47.90	49.88	49.63	47.61	44.87	40.72
10	0.00	3.28	14.28	23.12	32.10	39.42	45.45	48.56	49.96	49.53	47.59	44.75
11	0.00	2.72	11.15	19.02	27.86	35.48	41.51	46.32	49.08	49.99	49.40	47.40
12	0.00	1.73	9.05	15.46	23.79	31.01	37.72	43.26	47.21	49.37	49.99	49.28
attacker	_wins_	std,	table									
attackers	_wins_ <b>1</b>	std, 1	table 3	4	5	6	7	8	9	10	11	12
	1	2	3				7		9	10	11	12
attackers	49.35	43.07		21.36	<b>5</b> 14.37	8.08	6.62	3.84	<b>9</b> 2.45	1.84	1.26	0.89
attackers defenders 1 2	49.35 30.78	43.07 48.02	27.88 47.44			8.08 27.88	6.62	3.84 19.56				
attackers defenders 1	49.35 30.78 20.80	43.07 48.02 41.78	27.88 47.44 49.96	21.36 44.29 48.40	14.37 37.67 44.56	8.08 27.88 36.60	6.62 24.97 32.54	3.84 19.56 27.61	2.45 13.57 21.01	1.84 12.28 18.51	1.26	0.89
attackers defenders  1 2 3 4	1 49.35 30.78 20.80 10.30	43.07 48.02 41.78 29.72	27.88 47.44 49.96 46.77	21.36 44.29 48.40 49.64	14.37 37.67 44.56 49.70	8.08 27.88 36.60 45.67	6.62 24.97 32.54 41.66	3.84 19.56 27.61 37.16	2.45 13.57 21.01 30.51	1.84 12.28 18.51 26.69	1.26 9.49 15.10 22.88	0.89 6.09 11.33 17.86
attackers defenders 1 2 3	49.35 30.78 20.80	43.07 48.02 41.78 29.72 23.37	27.88 47.44 49.96 46.77 43.01	21.36 44.29 48.40 49.64 47.91	14.37 37.67 44.56 49.70 49.89	8.08 27.88 36.60 45.67 48.90	6.62 24.97 32.54 41.66 46.30	3.84 19.56 27.61 37.16 42.80	2.45 13.57 21.01	1.84 12.28 18.51	1.26 9.49 15.10	0.89 6.09 11.33
attackers defenders  1 2 3 4 5	49.35 30.78 20.80 10.30 6.90 3.71	43.07 48.02 41.78 29.72 23.37 15.04	27.88 47.44 49.96 46.77 43.01 34.87	21.36 44.29 48.40 49.64 47.91 42.47	14.37 37.67 44.56 49.70 49.89 47.26	8.08 27.88 36.60 45.67 48.90 49.91	6.62 24.97 32.54 41.66 46.30 49.55	3.84 19.56 27.61 37.16 42.80 47.59	2.45 13.57 21.01 30.51 37.34 43.73	1.84 12.28 18.51 26.69 32.78 39.79	1.26 9.49 15.10 22.88 28.88 35.95	0.89 6.09 11.33 17.86 24.11 30.66
attackers defenders  1 2 3 4 5 6 7	49.35 30.78 20.80 10.30 6.90 3.71 2.49	43.07 48.02 41.78 29.72 23.37 15.04 11.76	27.88 47.44 49.96 46.77 43.01 34.87 30.29	21.36 44.29 48.40 49.64 47.91 42.47 39.01	14.37 37.67 44.56 49.70 49.89 47.26 44.32	8.08 27.88 36.60 45.67 48.90 49.91 48.64	6.62 24.97 32.54 41.66 46.30 49.55 49.97	3.84 19.56 27.61 37.16 42.80 47.59 49.47	2.45 13.57 21.01 30.51 37.34 43.73 47.21	1.84 12.28 18.51 26.69 32.78 39.79 44.22	1.26 9.49 15.10 22.88 28.88 35.95 40.92	0.89 6.09 11.33 17.86 24.11 30.66 36.30
attackers defenders  1 2 3 4 5 6 7	49.35 30.78 20.80 10.30 6.90 3.71 2.49 1.26	43.07 48.02 41.78 29.72 23.37 15.04 11.76 7.48	27.88 47.44 49.96 46.77 43.01 34.87 30.29 22.88	21.36 44.29 48.40 49.64 47.91 42.47 39.01 32.09	14.37 37.67 44.56 49.70 49.89 47.26 44.32 38.83	8.08 27.88 36.60 45.67 48.90 49.91 48.64 45.27	6.62 24.97 32.54 41.66 46.30 49.55 49.97 48.59	3.84 19.56 27.61 37.16 42.80 47.59 49.47 49.91	2.45 13.57 21.01 30.51 37.34 43.73 47.21 49.55	1.84 12.28 18.51 26.69 32.78 39.79 44.22 47.89	1.26 9.49 15.10 22.88 28.88 35.95 40.92 45.14	0.89 6.09 11.33 17.86 24.11 30.66 36.30 41.58
attackers defenders  1 2 3 4 5 6 7 8 9	49.35 30.78 20.80 10.30 6.90 3.71 2.49 1.26 0.89	43.07 48.02 41.78 29.72 23.37 15.04 11.76 7.48 5.72	27.88 47.44 49.96 46.77 43.01 34.87 30.29 22.88 19.87	21.36 44.29 48.40 49.64 47.91 42.47 39.01 32.09 28.21	14.37 37.67 44.56 49.70 49.89 47.26 44.32 38.83 35.24	8.08 27.88 36.60 45.67 48.90 49.91 48.64 45.27 41.99	6.62 24.97 32.54 41.66 46.30 49.55 49.97 48.59 46.36	3.84 19.56 27.61 37.16 42.80 47.59 49.47 49.91 48.95	2.45 13.57 21.01 30.51 37.34 43.73 47.21 49.55 49.99	1.84 12.28 18.51 26.69 32.78 39.79 44.22 47.89 49.47	1.26 9.49 15.10 22.88 28.88 35.95 40.92 45.14 47.95	0.89 6.09 11.33 17.86 24.11 30.66 36.30 41.58 45.34
attackers defenders  1 2 3 4 5 6 7 8 9 10	1 49.35 30.78 20.80 10.30 6.90 3.71 2.49 1.26 0.89 0.45	43.07 48.02 41.78 29.72 23.37 15.04 11.76 7.48 5.72 3.46	3 27.88 47.44 49.96 46.77 43.01 34.87 30.29 22.88 19.87 14.66	21.36 44.29 48.40 49.64 47.91 42.47 39.01 32.09 28.21 22.76	14.37 37.67 44.56 49.70 49.89 47.26 44.32 38.83 35.24 29.90	8.08 27.88 36.60 45.67 48.90 49.91 48.64 45.27 41.99	6.62 24.97 32.54 41.66 46.30 49.55 49.97 48.59 46.36 42.57	3.84 19.56 27.61 37.16 42.80 47.59 49.47 49.91 48.95 46.48	2.45 13.57 21.01 30.51 37.34 43.73 47.21 49.55 49.99 49.00	1.84 12.28 18.51 26.69 32.78 39.79 44.22 47.89 49.47 49.98	1.26 9.49 15.10 22.88 28.88 35.95 40.92 45.14 47.95 49.67	0.89 6.09 11.33 17.86 24.11 30.66 36.30 41.58
attackers defenders  1 2 3 4 5 6 7 8 9 10 11	1 49.35 30.78 20.80 10.30 6.90 3.71 2.49 1.26 0.89 0.45 0.00	43.07 48.02 41.78 29.72 23.37 15.04 11.76 7.48 5.72 3.46 2.61	3 27.88 47.44 49.96 46.77 43.01 34.87 30.29 22.88 19.87 14.66 12.25	21.36 44.29 48.40 49.64 47.91 42.47 39.01 32.09 28.21 22.76 20.14	14.37 37.67 44.56 49.70 49.89 47.26 44.32 38.83 35.24 29.90 26.26	8.08 27.88 36.60 45.67 48.90 49.91 48.64 45.27 41.99 37.16 33.16	6.62 24.97 32.54 41.66 46.30 49.55 49.97 48.59 46.36 42.57 39.27	3.84 19.56 27.61 37.16 42.80 47.59 49.47 49.91 48.95 46.48 43.71	2.45 13.57 21.01 30.51 37.34 43.73 47.21 49.55 49.99 49.00 47.22	1.84 12.28 18.51 26.69 32.78 39.79 44.22 47.89 49.47 49.98 49.32	1.26 9.49 15.10 22.88 28.88 35.95 40.92 45.14 47.95 49.67 49.99	0.89 6.09 11.33 17.86 24.11 30.66 36.30 41.58 45.34 48.06 49.62
attackers defenders  1 2 3 4 5 6 7 8 9 10	1 49.35 30.78 20.80 10.30 6.90 3.71 2.49 1.26 0.89 0.45	43.07 48.02 41.78 29.72 23.37 15.04 11.76 7.48 5.72 3.46	3 27.88 47.44 49.96 46.77 43.01 34.87 30.29 22.88 19.87 14.66	21.36 44.29 48.40 49.64 47.91 42.47 39.01 32.09 28.21 22.76	14.37 37.67 44.56 49.70 49.89 47.26 44.32 38.83 35.24 29.90	8.08 27.88 36.60 45.67 48.90 49.91 48.64 45.27 41.99	6.62 24.97 32.54 41.66 46.30 49.55 49.97 48.59 46.36 42.57	3.84 19.56 27.61 37.16 42.80 47.59 49.47 49.91 48.95 46.48	2.45 13.57 21.01 30.51 37.34 43.73 47.21 49.55 49.99 49.00	1.84 12.28 18.51 26.69 32.78 39.79 44.22 47.89 49.47 49.98	1.26 9.49 15.10 22.88 28.88 35.95 40.92 45.14 47.95 49.67	0.89 6.09 11.33 17.86 24.11 30.66 36.30 41.58 45.34 48.06

file:///home/trevormaxjs/Downloads/Risk.html

attackers	1	2	3	4	5	6	7	8	9	10	11	12
defenders												
1	0.00	0.09	0.51	4.56	4.54	2.28	3.02	1.90	1.18	1.21	0.82	0.89
2	-0.06	-0.11	0.03	3.27	6.32	3.17	7.14	5.52	3.64	4.62	4.07	1.76
3	4.79	1.19	0.03	0.37	2.45	1.65	3.75	5.29	3.05	4.73	4.37	3.16
4	2.02	0.81	0.25	-0.28	1.62	2.06	4.29	5.75	4.82	6.12	6.26	4.69
5	2.13	1.81	2.82	-0.05	-0.11	0.83	2.09	4.31	3.88	5.38	5.55	5.60
6	1.52	0.67	0.50	-0.89	-1.59	-0.04	1.44	3.13	4.30	5.28	6.65	5.56
7	1.22	1.17	2.65	0.65	-1.50	-0.76	0.08	1.54	2.69	4.17	5.42	6.03
8	0.82	0.64	0.23	-0.75	-3.09	-1.58	-1.10	0.15	1.74	3.31	4.66	5.37
9	0.89	0.76	1.96	0.17	-1.53	-1.84	-1.54	-0.94	0.35	1.86	3.09	4.63
10	0.45	0.18	0.38	-0.37	-2.21	-2.26	-2.88	-2.08	-0.96	0.45	2.08	3.31
11	0.00	-0.11	1.11	1.12	-1.59	-2.31	-2.25	-2.61	-1.86	-0.68	0.59	2.23
12	0.00	0.32	0.06	-0.09	-2.13	-2.37	-3.08	-3.33	-2.99	-2.01	-0.73	0.71

Lots there. Lets talk about the very last table, so the one right above this text. This shows the difference in the variance of the attacker winning when you go from standard rules to table rules. My takeaways are:

- 1. Slightly lower variance in larger battles when the attacker is outnumbered by a a little (middle/bottom triangle)
- 2. Much higher variance when the defender is outnumbered (top/right)
- 3. Very little change when the battle is even
- 4. Higher variance when there are fewer attackers (left side)

The other one to talk about is the percentage chance that the attacker wins, which is the fourth plot from the bottom. This shows that the table rules are just a straight debuff for the attacker, which gets worse the more defenders there are.

In [ ]: