

Startup Battle. Read the rules in sections 2.2, 2.6, 3.1, 3.3, 6.1, 6.3, 5.2, chapter 8 and the Tactics Guide in this booklet. These cover moving surface ships, firing and moving torpedoes, surface gunnery, visual detection, command and control, damage to surface ships, and tactics.

This battle is representative of the various engagements that occurred in the North Sea during World War I, although it has been scaled down for this sample.

Location: North Sea, ESE of Dogger Bank. March 27, 1915. Local time is 1300.

Operational Situation: The German High Seas Fleet is attempting to draw out elements of the British Grand Fleet and catch them on the open seas with even odds for a fair fight. If portions of the Royal Navy can be eliminated, then the Imperial Navy stands a better chance at winning a "winner-takes-all" battle.

The British are trying to engage any of the German fleet that dare challenge the Royal Navy for control of the seas.

Tactical Situation: German armored cruisers have just raided the east coast of the English mainland north of London and are sprinting for home. A British battle cruiser is in pursuit. A German battle cruiser is providing protective escort for the return trip and moves to intercept.

Environment: Moderate haze, visibility 40%. Seas moderate, sea state 3. Winds from SE (135°) at 12 knots. Sunset is 1830 local.

German Forces:

Seydlitz (Seydlitz class battle cruiser)
Pillau (Pillau class light cruiser)

Destroyer Half-Flotilla II

V.25 (V.25 class destroyer)
V.26 (V.25 class destroyer)
V.27 (V.25 class destroyer)
V.28 (V.25 class destroyer)

German Orders: Provide distant escort for the raiding force. Engage the enemy if possible. If faced by superior forces, inflict as much damage as possible, but with minimal risk to the battle cruiser.

German Victory Conditions: *Decisive:* Sink or cripple (greater than 50% damage) the British battle cruiser with the German battle cruiser not damaged greater than 25%. *Tactical:* Sink or cripple the British battle cruiser with the German battle cruiser not crippled.

British Forces:

Tiger (Tiger class battle cruiser)
Aurora (Arethusa class light cruiser)

Destroyer Division 2

Matchless (Admiralty M class destroyer)
Murray (Admiralty M class destroyer)
Moorsom (Admiralty M class destroyer)
Morris (Admiralty M class destroyer)

British Orders: Find and engage the enemy. Do not overly hazard the battle cruiser, but do not shirk from attacking units of the German Fleet.

British Victory Conditions: *Decisive:* Sink or cripple (greater than 50% damage) the German battle cruiser with the British battle cruiser not damaged greater than 25%. *Tactical:* Sink or cripple the German battle cruiser with the British battle cruiser not crippled.

Setup: Both forces are in the same formation. The light cruiser is 2000 yards in front of the battle cruiser. The destroyers are in a wing-like scouting line on either side of the light cruiser. {Destroyers are split into two lines of bearing (two ships each) 30° abaft the beam of the light cruiser on either side, 1000 yards between ships.} The range of flag hoist visual signals in 40% visibility is 3.2 kyds, so all ships in the formation can communicate without using wireless and possibly alerting the enemy to their position.

The British force is on course 110° at 17 knots.

The German force is on course 170° at 15 knots.

Seydlitz bears 045° from *Tiger* at 18.5 kyds.

Outcome:

1300: All ships continue as ordered. Range between BCs after movement is 17 kyds. No detection (Section 5.2.2).

1303: All ships continue as ordered. Range between BCs after movement is 15.6 kyds and between closest destroyers is 11.5 kyds. The BCs detect each other (Size A to size A is 16 kyds) and most of the formation (Size A to size D is 13.6 kyds), destroyers can also detect the BCs (Size D to size A is 13.2 kyds). Replot orders for 1306 and 1309 (Section 2.2.4.1).

1306: Range between BCs after movement is 13.75 kyds. Both BCs open fire at long range, both miss.

German force will signal change to new course 230°, increase speed (limited to 2 kts per turn when above 50% of max speed) (Section 3.1.1), and new formation. *Pillau* is to drop to 500 yards in front of *Seydlitz* and destroyers to form screen (*V.25*, *V.26*, *V.27*, *V.28* in a column) (Section 12.4.3) 1000 yards off the port bow of *Seydlitz*. (Formation worked out in advance so shortened signal could be sent, section 2.6.5.) Course and formation change can not occur until 1309 to allow for flag hoist signals to be sent, received and understood. (Section 2.7.3)

British force will increase speed (limited to 2 kts per turn when above 50% of max speed), but maintain course and formation. Speed change can not occur until 1309 to allow for flag hoist signals to be sent, received and understood.

For *Tiger* shooting at *Seydlitz*. (Gunnery standard 2) (Section 6.1.4)

Visibility of 40%	-10%
Target size/aspect (Quarter A)	+5%
Number of barrels (8)	+15%
Total modifiers/2	= +5%
Long range base chance	15%
Chance to hit	= 20%

For *Seydlitz* shooting at *Tiger*.

Visibility of 40%	-10%
Target size/aspect (Broad A)	+10%
Number of barrels (4)	+5%
Total modifiers/2	= +2%
Long range base chance	15%
Chance to hit	= 17%

1309: Range between BCs after movement is 11.6 kyds. Both BCs fire at long range, both miss.

British increase speed to 19 kts.

Germans increase speed to 17 kts, and make the turn to new course and new formation.

For *Tiger* shooting at *Seydlitz*.

Visibility of 40%	-10%
Target size/aspect (Quarter A)	+5%
Number of barrels (8)	+15%
Total modifiers/2	= +5%
Long range base chance	15%
Chance to hit	= 20%

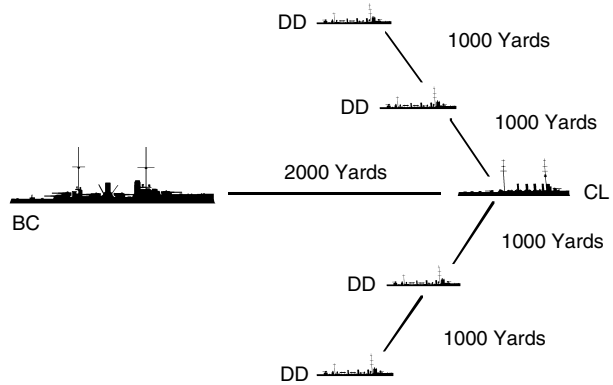
For *Seydlitz* shooting at *Tiger*.

Visibility of 40%	-10%
Target size/aspect (Broad A)	+10%
Number of barrels (4)	+5%
Total modifiers/2	= +2%
Long range base chance	15%
Chance to hit	= 17%

1312: Range between BCs after movement is 10.6 kyds. This is medium range *Tiger*, but still long range for *Seydlitz*. Germans increase speed to 19 kts. *Seydlitz* continues to fire and misses.

British increase speed to 21 kts. *Tiger* continues to fire and hits *Seydlitz*. The British commander realizes that *Seydlitz* will start crossing behind him and *Tiger's* forward guns will not bear on the target. A series of 40° turns to port per turn is signaled to start on 1318. This keeps fire control on target. (A 40° turn does not suffer any minuses to hit.) (Section 6.1.4)

STARTING FORMATION



For *Tiger* shooting at *Seydlitz*.

Visibility of 40%	-10%
Target size/aspect (Quarter A)	+5%
Number of barrels (8)	+15%
Third turn of fire	+5%
Total modifiers/2	= +7%
Medium range base chance	35%
Chance to hit	= 42%

For *Seydlitz* shooting at *Tiger*.

Visibility of 40%	-10%
Target size/aspect (Broad A)	+10%
Number of barrels (8)	+15%
Third turn of fire	+5%
Total modifiers/2	= +10%
Long range base chance	15%
Chance to hit	= 25%

Tiger's guns with APC rounds are capable of penetrating an armor of 24 and *Seydlitz* has a belt armor rating of 22. Therefore *Tiger's* rounds penetrate and do full damage. (Section 8.1.6) At medium range *Tiger's* guns do 21 points of damage, and with 8 barrels firing, this is multiplied by 3 for 63 point of damage. (Section 6.1.4) *Seydlitz* has 447 damage points to start with and is on a Critical Hit line .1 (63/(447-63)= 0.16, but round down) (Section 8.1.3) A die roll of 3 means no critical hits.

1315: Range between BCs after movement is 8.75 kyds. This is medium range for both *Tiger* and *Seydlitz*.

British increase speed to 23 kts. *Tiger* continues to fire and hits *Seydlitz*.

Germans increase speed to 21 kts. *Seydlitz* continues to fire and hits *Tiger*.

For *Tiger* shooting at *Seydlitz*.

Visibility of 40%	-10%
Target size/aspect (Broad A)	+10%
Number of barrels (8)	+15%
Fourth turn of fire	+5%
Total modifiers/2	= +10%
Medium range base chance	35%
Chance to hit	= 45%

For *Seydlitz* shooting at *Tiger*:

Visibility of 40%	-10%
Target size/aspect (Broad A)	+10%
Number of barrels (8)	+15%
Fourth turn of fire	+5%
Total modifiers/2	= 10%
Medium range base chance	35%
Chance to hit	= 45%

Seydlitz takes another 63 points of damage and is on the .2 critical hit line. A die roll of five is one critical hit. A die roll of 4 on a D10 indicates she suffers an 'other weapon' critical hit to her underwater torpedo tube (Section 8.1.3). *Seydlitz* is also limited to 20 knots due to being damaged over 25% (126 point out of 447) (Section 8.1.2).

Tiger's belt armor of 18 is penetrated by *Seydlitz's* APC shells which can penetrate 28. With 8 barrels firing (x3) on a base damage of 12, *Tiger* suffers 36 points of damage, leaving 465 damage points. Against an initial 501 damage points, *Tiger* is on the >.1 critical hit line, and a die roll of 4 misses any critical hits.

1318: Range between BCs after movement is 8.25 kyds. This is medium range for main guns of both *Tiger* and *Seydlitz*.

Germans increase speed to 23 kts, except *Seydlitz*. *Seydlitz* continues to fire and misses. The German commander detects the British course change and signals his destroyers, with *Pillau*, to execute an immediate 'opportunity' torpedo attack on 1321 (Section 12.2.2.4).

British increase speed to 25 kts. *Tiger* continues to fire and hits *Seydlitz*. The British change course to 070° and *Aurora* drops to 1000 yards in front of *Tiger*.

For *Tiger* shooting at *Seydlitz*:

Visibility of 40%	-10%
Target size/aspect (Broad A)	+10%
Number of barrels (8)	+15%
Fifth turn of fire	+5%
Total modifiers/2	= +10%
Medium range base chance	35%
Chance to hit	= 45%

For *Seydlitz* shooting at *Tiger*:

Visibility of 40%	-10%
Target size/aspect (Broad A)	+10%
Target speed ≥25 kts	-10%
Number of barrels (8)	+15%
Fifth turn of fire	+5%
Total modifiers/2	= +5%
Medium range base chance	35%
Chance to hit	= 40%

Seydlitz takes another 63 points of damage. She is still on the .2 critical hit line and no critical hits are rolled. *Seydlitz* has 258 damage points left.

1321: Range between BCs after movement is 8.5 kyds. This is medium range for main guns of both *Tiger* and *Seydlitz*.

British increase speed to 27 kts. *Tiger* continues to fire and hits *Seydlitz*. The British have changed course to 030°. The port side destroyers, *Moorsom* and *Morris*, *Aurora* and

Tiger's secondary fire on approaching German destroyers. *Matchless* and *Murray*, caught out of position on the starboard side of *Tiger* are unable to close on the attacking Germans.

Seydlitz continues to fire and hits *Tiger*. The destroyers increase speed to 27 kts and come to new course 110° and plot their torpedo for high speed (35 kts) on courses 105°, 110° and 115°. The lead destroyer, *V.25* sets for shallow against *Aurora*, other three set for deep against *Tiger* (Section 6.3.3). *Pillau* increases speed to 27 and follows the destroyers.

For *Tiger* shooting at *Seydlitz*:

Visibility of 40%	-10%
Target size/aspect (Broad A)	+10%
Number of barrels	+15%
Sixth turn of fire	+5%
Total modifiers/2	= +10%
Medium range base chance	35%
Chance to hit	= 45%

For *Seydlitz* shooting at *Tiger*:

Visibility of 40%	-10%
Target size/aspect (Broad A)	+10%
Target speed ≥25 kts	-10%
Number of barrels (8)	+15%
Sixth turn of fire	+5%
Total modifiers/2	= +5%
Medium range base chance	35%
Chance to hit	= 40%

For *Aurora* main gun (6") shooting at *V.25*:

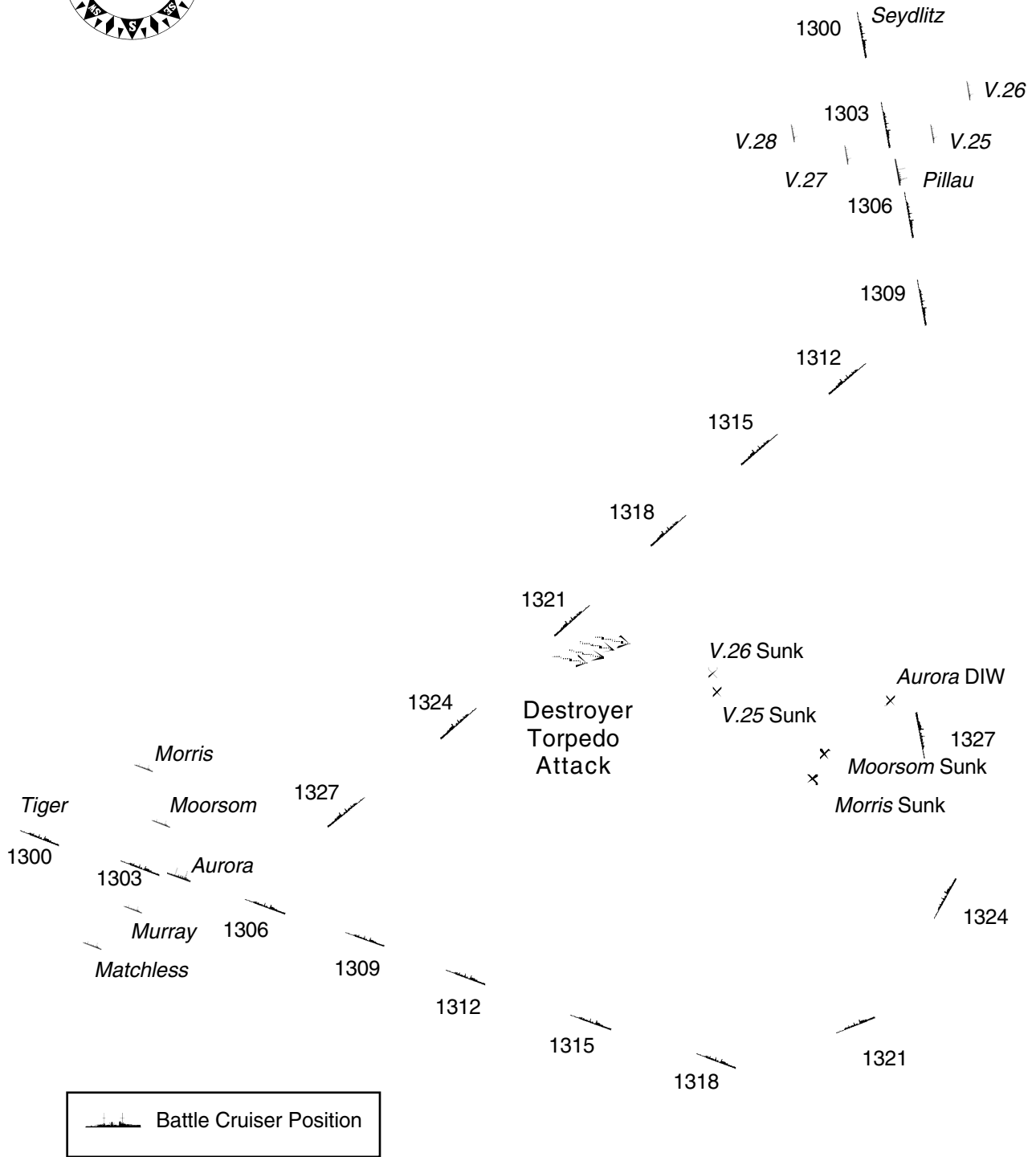
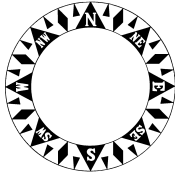
Visibility of 40%	-10%
Target size/aspect (Narrow D)	-10%
Target speed ≥25 kts	-10%
Number of barrels (1)	+0%
Total modifiers/2	= -15%
Medium range base chance	35%
Chance to hit	= 20%

For *Aurora* secondary (4.7") shooting at *V.25*:

Visibility of 40%	-10%
Target size/aspect (Narrow D)	-10%
Target speed ≥25 kts	-10%
Number of barrels (4)	+5%
Total modifiers/2	= -10%
Medium range base chance	35%
Chance to hit	= 25%

For *Pillau* shooting at *Moorsom*:

Visibility of 40%	-10%
Target size/aspect (Broad D)	-0%
Target speed ≥25 kts	-10%
Number of barrels (5)	+10%
Total modifiers/2	= -5%
Medium range base chance	35%
Chance to hit	= 30%



For *Moorsom* and *Morris* shooting at *V.25*:

Visibility of 40%	-10%
Target size/aspect (Narrow D)	-10%
Target speed \geq 25 kts	-10%
Number of barrels (3)	+5%
Total modifiers/2	= -12%
Medium range base chance	35%
Chance to hit	= 23%

For *V.25*, *V.26*, *V.27*, *V.28* shooting at *Morris*:

Visibility of 40%	-10%
Target size/aspect (Broad D)	-0%
Target speed \geq 25 kts	-10%
Number of barrels (2)*	+0%
Total modifiers/2	= -10%
Medium range base chance	35%
Chance to hit	= 25%

*Only F and P/S guns bear.

For *Tiger's secondary* shooting at *V.26*:

Visibility of 40%	-10%
Target size/aspect (Quarter D)	-5%
Target speed \geq 25 kts	-10%
Number of barrels (6)	+10%
Total modifiers/2	= -7%
Medium range base chance	35%
Chance to hit	= 28%

Tiger takes another 36 points of damage, leaving her at 429 damage points. This is still $<.1$ on the critical hit table and a die roll of 5 is again no critical hits. *Moorsom* is hit at medium range by the several of *Pillau's* guns. *Pillau's* 150mm guns with HE rounds do 17 points of damage, with 5 barrels, is multiplied by 2 for a total of 34 point of damage. Against *Moorsom's* 33 damage points, she is sunk outright. *Morris* is hit by *V.27* at medium range. The German destroyer does 12 points of damage. This places *Morris* at $.5$ on the critical hit line. On a die roll of 2 she suffers 2 critical hits, which the die rolls determine to be main gun and other weapon. A die roll of 0 on a D10 indicates it is the magazine explodes and *Morris* sinks (Section 8.2.15).

Seydlitz is further damaged by another 63 points of damage and forced to slow to 14 kts. *V.26* is hit by *Tiger's* secondary guns which do 32 points of damage. *V.26* can handle only 30 damage points and is sunk. *V.25* is hit by *Aurora's* main gun for 23 points of damage out of 30. After suffering 14 critical hits, which inflict another 6 points of damage, *V.25* goes dead in the water with no communications, no bridge, two minor fires, two minor flooding, several rudder hits and two of her three guns out of action.

1324: Range between BCs after movement is 9.6 kyds. This is medium range for *Tiger*, but back to long range for *Seydlitz*.

V.27, *V.28*, and *Pillau* change course to 250° and lay smoke as they withdraw. *Seydlitz* is plotted to fire but the smoke screen obscures *Tiger*.

Tiger is plotted to fire, but the smoke screen obscures *Seydlitz*. *Matchless* and *Murray* increase speed to 34 and cross behind *Tiger* to guard against a possible second German torpedo attack.

Of the 15 torpedoes (six two-torpedo salvos at 17% and three one-torpedo salvo at 9%) launched at *Tiger* at range of 4 kyds, three hit (Section 6.3.2). *Tiger's* torpedo protection absorbs 50 points of 150 points of damage (three torpedoes at 50 point of damage each), so she takes 100 points (Section 8.1.7.2). The torpedoes also inflict three automatic Flooding critical hits (section 8.1.3).

From her current damage points of 429, this places *Tiger* on the $.4$ critical hit line. A die roll of 5 means four critical hits. The four D10 die rolls are 4, 6, 8, 1: flooding, flooding, engineering (with minor fire), and weapon. This is a total of five flooding criticals, counting the three inflicted automatically by the torpedoes. The die rolls for the types of flooding (2, 4, 5, 7, and 10) indicate three minor, one major, and one severe flooding critical (Section 8.2.12). The engineering hit comes with a minor fire and drop *Tiger's* speed by one level (Section 8.2.8). The weapon die roll is a main battery, and B turret is knocked out of action, but does not explode (Section 8.2.15). The flooding criticals add another $2\%+2\%+2\%+4\%+6\%$ of the ship's original damage points, and the minor fire adds 2%. This is a $80 + 10$ points of additional critical hit damage for a total of 90 points of damage. This means *Tiger* has $429 - 100$ (torpedoes) - 90 (critical hits) = 239 damage points left.

Aurora is hit by one of the five torpedoes (two two-torpedo salvos (14%) and one one-torpedo salvo (7%) at 5 kyds). This places *Aurora* on the $.7$ critical hit line ($50/(115-50)$) and she suffers seven critical hits: three engineering (with three minor fires), a minor fire, three minor flooding, and loss of port torpedo tubes. The automatic critical from the torpedo hit adds another minor flooding. She goes dead in the water and takes another 16% (18) points of damage from the critical hits, leaving *Aurora* with 47 damage points.

For *Tiger's secondary* shooting at *V.25*:

Visibility of 40%	-10%
Target size/aspect (Broad D)	-0%
Target speed 0 kts	+10%
Number of barrels (6)	+10%
Total modifiers/2	= +5%
Medium range base chance	35%
Chance to hit	= 40%

V.25 is hit by the secondary guns of *Tiger* for another 32 points of damage against her remaining 1 damage point and sinks.

1327: Range between battle cruisers is now 15.2 kyds. This is long range for both *Tiger* and *Seydlitz*. It also exceeds the rangefinder capability of both battle cruisers.

Tiger continues north, unable to find a target in the retreating German smoke screen.

Seydlitz continues southwest and withdraws, also unable to find a target due to the smoke screen. *Seydlitz's* retreat is covered by *Pillau*, *V.26* and *V.28*.

1330: The battle is over. *Seydlitz* has suffered 254 points out of 447, this is over 50% and she is considered to be crippled. This defeats both of the German victory conditions. *Tiger* has taken 262 points out of 501. This is over 50%, so *Tiger* is crippled (barely), and the British player also loses as well.