

inchworm.txt

3	:::		:::		:::		:::		
2		:::		:::		:::		:::	
1	:::		:::		:::		:::		
	a	b	c	d	e	f	g	h	

Red = 25 stock pieces
 0 captured Blue pieces
 0 points

Play & Notation

Determine who will go first by some mutually agreeable fair method. During his own turn, a player may do exactly one of the following five things (passing is not allowed unless both players agree that there is no legal move):

- * If his stock is not empty, he may drop exactly one of his own pieces onto any vacant square. In Figure 2, Red has just opened by dropping a piece at d3. When recording games, a drop move is noted simply by its algebraic coordinates.

Figure 2

Blue = 25 stock pieces
 0 captured Red pieces
 0 points

8		:::		:::		:::		:::	
7	:::		:::		:::		:::		
6		:::		:::		:::		:::	
5	:::		:::		:::		:::		
4		:::		:::		:::		:::	
3	:::		:::	R1	:::		:::		
2		:::		:::		:::		:::	
1	:::		:::		:::		:::		
	a	b	c	d	e	f	g	h	

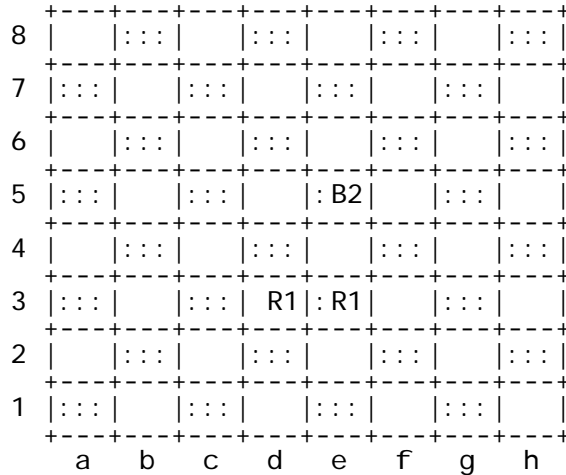
Red = 24 stock pieces
 0 captured Blue pieces
 0 points

- * If his stock is not empty, he may drop exactly one of his own pieces on top of any of his own pieces already on the board, thus forming or increasing a stack. Using drop moves, a player may increase a stack to any height, until his stock is empty. In Figure 3, Blue has just formed a stack two pieces

high at e5. Individual pieces may be considered as stacks only one piece high.

Figure 3

Blue = 23 stock pieces
 0 captured Red pieces
 0 points

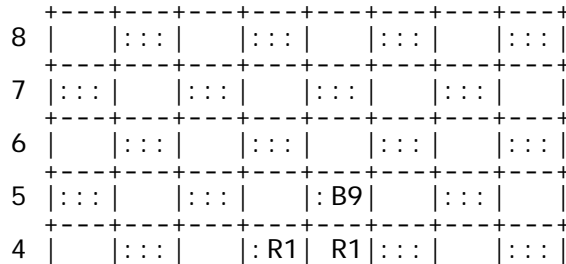


Red = 23 stock pieces
 0 captured Blue pieces
 0 points

- * Collect a linearly connected group of his own pieces or stacks into a single combined stack. Pieces or stacks so collected may lie along any straight line or diagonal. In Figure 4a, Blue's stack at e5 is tempting. Red can threaten it by collecting the short stacks on spaces e1 through e4 into a stack as in Figure 4b. When recording games, a collection move is noted by the starting and ending algebraic coordinates connected by an equals sign. Red's move shown in Figures 4a and 4b would therefore be written e1=e4. Other legal moves for Red in Figure 4a include d4=e4 and d3=e5, but collecting around a corner such as e1=e4=d4=d3 would not be legal.

Figure 4a

Blue = 16 stock pieces
 0 captured Red pieces
 0 points



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3 +---+---+---+---+---+---+---+---+
  |:::|   |:::| R1|R3|   |:::|   |
+---+---+---+---+---+---+---+---+
2 |   |:::|   |:::| R1|:::|   |:::|
+---+---+---+---+---+---+---+---+
1 |:::|   |:::|   |:R2|   |:::|   |
+---+---+---+---+---+---+---+---+
  a   b   c   d   e   f   g   h

```

Red = 16 stock pi eces
0 captured Bl ue pi eces
0 poi nts

Figure 4b

Bl ue = 16 stock pi eces
0 captured Red pi eces
0 poi nts

```

8 +---+---+---+---+---+---+---+---+
  |   |:::|   |:::|   |:::|   |:::|
+---+---+---+---+---+---+---+---+
7 |:::|   |:::|   |:::|   |:::|   |
+---+---+---+---+---+---+---+---+
6 |   |:::|   |:::|   |:::|   |:::|
+---+---+---+---+---+---+---+---+
5 |:::|   |:::|   |:B9|   |:::|   |
+---+---+---+---+---+---+---+---+
4 |   |:::|   |:R1| R7|:::|   |:::|
+---+---+---+---+---+---+---+---+
3 |:::|   |:::|   R1|:::|   |:::|   |
+---+---+---+---+---+---+---+---+
2 |   |:::|   |:::|   |:::|   |:::|
+---+---+---+---+---+---+---+---+
1 |:::|   |:::|   |:::|   |:::|   |
+---+---+---+---+---+---+---+---+
  a   b   c   d   e   f   g   h

```

Red = 16 stock pi eces
0 captured Bl ue pi eces
0 poi nts

- * Di stribute one of hi s own stacks i nto a wi ndi ng group of i ndi vi dual pi eces begi nni ng wi th the space where the stack started. I n di stributi ng stacked pi eces, any path may be taken, i ncl udi ng straight li nes and di agonal s, but the enti re stack must be di stributed i nto i ndi vi dual pi eces. I n Figure 4b, Bl ue can di stribute the stack at e5 to e5 (the starti ng space), f4, e3, d2, c3, c4, d4, d5, d6 and d7. When recordi ng games, di stributi on moves can be wri tten al gebrai cal l y begi nni ng wi th the starti ng space and fol l owi ng the path taken, connected by dashes. The notati on for the move resul ti ng i n Figure 5a woul d be e5-f4-e3-d2-c3-c4-d5-d6-d7

Figure 5a

Bl ue = 16 stock pi eces
0 captured Red pi eces
0 poi nts

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8		:::		:::		:::		:::	
7		:::		B1	:::		:::		
6		:::		:B1		:::		:::	
5		:::		B1	B1		:::		
4		:::		B1	R1	R7	B1		:::
3		:::		:B1	R1	B1		:::	
2		:::		:B1		:::		:::	
1		:::		:::		:::		:::	
		a	b	c	d	e	f	g	h

Red = 16 stock pieces
 0 captured Blue pieces
 0 points

In Figure 5a, Blue has orthogonally surrounded the two individual Red pieces at d3 and d4 and the Red stack at e4. Surrounded pieces are taken as prisoners and one point is immediately scored for each. The result is shown in Figure 5b. Note that when a stack is distributed, it may move along diagonal lines as well as straight (orthogonal) lines, but in order to capture, only the orthogonal lines need to be blocked. When recording games, an X is placed after the move that resulted in capture, followed by a list of the algebraic locations of the captured pieces or stacks. The move resulting in Figure 5b would be noted as e5-f4-e3-d2-c3-c4-d5-d6-d7 X d3-d4-e4.

Figure 5b

Blue = 16 stock pieces
 9 captured Red pieces
 9 points

8		:::		:::		:::		:::	
7		:::		B1	:::		:::		
6		:::		:B1		:::		:::	
5		:::		B1	B1		:::		
4		:::		B1	:::		:B1		:::
3		:::		:B1		:B1		:::	
2		:::		:B1		:::		:::	
1		:::		:::		:::		:::	
		a	b	c	d	e	f	g	h

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Red = 16 stock pieces
0 captured Blue pieces
0 points

- * Rescue all prisoners held by his opponent and returning them to his stock. In Figure 5b, Blue has captured nine of Red's pieces. Red may choose to use his turn to rescue those prisoners and add them to his stock. When recording games, this is noted by an R followed by the number of pieces rescued. The move resulting in the position shown in Figure 6 would be recorded as R9.

Figure 6

Blue = 16 stock pieces
0 captured Red pieces
9 points

8		:::		:::		:::		:::	
7		:::		: B1		:::		:::	
6		:::		: B1		:::		:::	
5		:::		: B1		: B1		:::	
4		:::		: B1		:::		: B1	
3		:::		: B1		: B1		:::	
2		:::		: B1		:::		:::	
1		:::		:::		:::		:::	
		a	b	c	d	e	f	g	h

Red = 25 stock pieces
0 captured Blue pieces
0 points

Note that even though Blue no longer controls the captured Red pieces, his score remains unchanged. Points are not lost when pieces are rescued; they only return to their original owner's stock.

Notes on Captures

Any individual pieces and/or stacks of pieces that are orthogonally surrounded, including those trapped against one or more edges of the board, by opposing pieces or stacks of pieces may be taken as prisoners and scored, no matter how those pieces came to be surrounded. Playing so that your own pieces are captured is perfectly fine, and may even be a useful tactic if the stock is empty or nearly so, or if opposing pieces are simultaneously captured by such a move. In Figure 7, the Red piece at a8 and the group of two Red pieces at a3-a4 may be captured by Blue. If Red were to play at h1, only the played piece would be captured by Blue; however, if Red

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were to play at h8, the played piece would still be captured by Blue, but Red would also capture the group of three Blue pieces at g7-g8-h7.

Figure 7

Blue = 9 stock pieces
0 captured Red pieces
0 points

8	R1	B1		:::			: R1	B1	:::	
7	: B1	B1	:::			:::	R1	B1	B1	
6		:::		:::		: R1	R1	: R1		
5	: B1		:::		:::		:::			
4	R1	B1		:::		:::		:::		
3	: R1	B1	:::			: R1	R1	: R1	R1	
2	B1	:::		: R1	B1	: B1	B1	: B1	B1	
1	:::		:::	R1	B1		: B1			
	a	b	c	d	e	f	g	h		

Red = 11 stock pieces
0 captured Blue pieces
0 points

Winning

The first player to score at least 60 points wins.

Variations

A variation that makes capturing more difficult (and hence lengthens the game) is to eliminate the side and/or baseline board edges, wrapping them around like a cylinder or torus, respectively. Capturing on a cylindrical board is more difficult than on one with edges to the side, and capturing on a board shaped like a torus is even more difficult.

Another variation that increases offensive potential is to allow placement of captured opposing pieces. Their usefulness in filling eyes in your opponent's formations can increase game tension and result in faster scoring. However, this can lead to a trivial situation where opposing pieces are repeatedly played into the eyes of your own formations and recaptured and scored over and over again, reducing the game to a race.

Handicaps

If one player is noticeably stronger than the other,

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a fair handicap system is for the stronger player to use fewer pieces. As the stock empties, the stronger player will need to spend more turns rescuing his prisoners, thereby giving the weaker player a few extra turns to gain positional advantages. One or two pieces constitute a relatively minor handicap, but five pieces is significant.

Strategy

Making eyes (unfilled areas surrounded by your own pieces) as in Go is a useful strategy for preventing your opponent from scoring points. However, as in Go beware piece formations with only one eye, as these may allow your opponent to capture entire groups at once. On the other hand, formations with two eyes take many pieces, and if there are no stock pieces, a player may be forced to break up a stable formation to form or distribute a stack.

Don't become too attached to your pieces. Both players will capture many opposing pieces, and in fact, that's the idea of the game. But captured pieces can be rescued and dropped inside vulnerable formations controlled by your opponent. A small sacrifice can be worth several points.

If your opponent has a stable formation with two or more eyes, try to immobilize your opponent's other formations by crowding them together and/or against an edge or corner of the board. Eventually, your opponent's stock will run out, and he will be forced to distribute or (more likely) form a stack. Often these new stacks are easy to capture.

Try to keep at least a few pieces in your stock. Since they can be dropped on any empty board space or on top of any of your own stacks, stock pieces are the key to tactical flexibility.

Know how many pieces are required to surround and capture any formation, both your own and those of your opponent. Defense in the center is easier than near the edges, but easy attacks near the edges can leave many vulnerable pieces for your opponent to capture. One piece in the open requires at least four pieces to capture it, and lengthening a group in the open by one requires two more pieces -- an advantage to the defense. But space on an 8x8 board is at a premium, and once pieces get more crowded, defense becomes more difficult.

Wait either until you have only two or three stock pieces left or until your opponent has just made a big capture before rescuing prisoners. This minimizes the number of turns wasted rescuing prisoners. Of course, if there are no attractive moves available, and since passing is not allowed, rescuing prisoners at other times may be a good tactic.

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Problems

Sample Game

Answers to Problems