



LIZ DIXON

Best Strategy

The best strategy (for both parties) is to head for the place closest to the city on the perpendicular bisector of the line joining the knight and the dragon (as shown in the diagram):

```

TO KNIGHT.MOVE
  TELL :DRAGON MAKE "DX XCOR MAKE "DY
  YCOR TELL :KNIGHT MAKE "KX XCOR MAKE
  "KY YCOR TELL :CITY MAKE "CX XCOR MAKE
  "CY YCOR
  MAKE "SX (:DX + :KX) / 2
  MAKE "SY (:DY + :KY) / 2
  MAKE "VX (:DY - :KY)
  MAKE "VY (:KX - :DX)
  MAKE "FACT (:VX * (:CD - :SX) + :VY *
  (:CY - :SY)) / ((:VX * :VX) * (:VX * :VX) +
  (:VY * :VY) * (:VY * :VY))
  MAKE "X :SX + :FACT * :VX
  MAKE "Y :SY + :FACT * :VY
  TELL :KNIGHT SETH TOWARDS :X :Y
  FD 10
END
  
```

Improved Move

An improved knight move, in which the knight heads to cut off the dragon:

```

TO KNIGHT.MOVE
  TELL :DRAGON MAKE "X XCOR MAKE "Y YCOR
  TELL :CITY
  MAKE "BEARING TOWARDS :X :Y
  TELL :KNIGHT SETH 270 + :BEARING
  IF XCOR < :X THEN LEFT 180
  FD 10
END
  
```

Keyboard Control

Keyboard control of the dragon:

```

TO DRAGON.MOVE
  TELL :DRAGON MOVE READKEY FD 10
END

TO MOVE :DIR
  IF :DIR = "W THEN SETH 0
  IF :DIR = "S THEN SETH 90
  IF :DIR = "Z THEN SETH 180
  IF :DIR = "A THEN SETH 270
END

TO READKEY
  IF RC? THEN OUTPUT READCHARACTER
  OUTPUT "
END
  
```



Abbreviations

BACKGROUND	BG
PENCOLOR	PC

Logo Flavours

Spectrum LOGO and the Apple LOGOs don't feature sprite graphics.

Atari users should note the following differences:

- 1) TS? does not exist. Omit the line IF HIT? etc. in PLAY and insert this line as the last line of SET.SCREEN:

```

WHEN TOUCHING :DRAGON :KNIGHT
  [DRAGON.DESTROYED STOP]
  
```

- 2) There are no equivalents for BIGX, BIGY, SMALLX and SMALLY. Simply omit them.

- 3) For BACKGROUND use SETBG, and for PENCOLOR use SETPC. The colour codes are different, of course.

- 4) Most surprisingly TOWARDS does not exist in Atari LOGO (it is included in the LCSI versions on the Apple and the Spectrum). Therefore, replace the lines:

```

  SETH TOWARDS :X :Y
  FD 10
  
```

in FOLLOW and KNIGHT.MOVE with

```

  MAKE "FRAC 10 / (SQRT ((XCOR - :X) * (XCOR
  - :X) + (YCOR - :Y) * (YCOR - :Y)))
  SETPOS LIST (XCOR + (:X - XCOR) * :FRAC)
  (YCOR + (:Y - YCOR) * :FRAC)
  
```