

HISTORY COURSE

The History of Chess

From the courts of India to the age of engines: the story of the game of kings.

10 Chapters

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THE HISTORY OF CHESS

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The History of Chess

Course 13 · Chapter 1 · Why Chess? Scope & Sources

Chess is one of the oldest games still played in much the same form. In roughly fifteen centuries it has travelled from northern India across Persia, the Islamic world and Europe, and now across the internet. This chapter explains what the game is, the vocabulary needed to follow the story, why it makes a good subject for history, and where reliable evidence is to be found. The broad outline is checked against published surveys; details are flagged "check".

The Game in Brief

Board and pieces

Two players, an eight-by-eight board of 64 squares, and sixteen pieces each: king, queen, two rooks, two bishops, two knights and eight pawns.

The aim

To checkmate the opposing king: to attack it so that it cannot escape. Games may also be drawn, by stalemate, repetition or agreement.

A game that changed

The rules above are the modern ones. The earliest forms had different pieces, and the powerful queen and long-ranging bishop are a later development, in Europe (Chapter 4).

A game and a mirror

Because chess is old, portable and rule-bound, it has been a mirror for each society that played it: a battle in India, a courtly pastime in medieval Europe, a contest of nations in the Cold War, a benchmark for machines. The history of chess is partly a history of those societies.

The Broad Outline

Stage (check each)	Where and when	Chapter
Chaturanga	Northern India, by about the sixth century CE; sources differ between the fifth and seventh	2
Shatranj	Persia and then the Islamic world, from the seventh century	2
Arrival in Europe	Spain and Sicily, with other routes, by about the tenth century	3
The new rules	Southern Europe, later fifteenth century: the queen and bishop gain their modern power	4
Modern chess	Clubs, tournaments, world champions, computers	5 to 9

The Language of Chess

Term (check each)	Meaning
Chaturanga	The early Indian form of the game; the name is usually explained as referring to the four divisions of an army (Chapter 2).
Shatranj	The Persian and Arabic form of the game, the ancestor of European chess.
Checkmate	A king under attack with no escape. The word is usually traced to the Persian *shah mat*, "the king is helpless" (check).
Castling	A move of king and rook together, which developed in Europe in the later Middle Ages.
Opening, middlegame, endgame	The three phases of a game.
Fork, pin	Tactics: one piece attacking two at once, or a piece held in place because moving it exposes a more valuable one.
Gambit	An opening in which a player offers material for an advantage in position.
Exchange	Trading pieces; "winning the exchange" means winning a rook for a minor piece.
Stalemate	No legal move, but not in check. A draw in modern rules.

Notation, with a Small Example

To study old games we need a way of writing them down. Modern players use algebraic notation: files are the letters a to h, ranks the numbers 1 to 8, and each piece has a letter. The opening below is a standard one, the Ruy Lopez, named after a Spanish priest who wrote about chess in the sixteenth century (check).

Copy

1. e4 e5 pawns advance to the centre 2. Nf3 Nc6 knights come out (N = knight) 3. Bb5 bishop attacks the knight (B = bishop)

Whether the sixteenth-century writer first analysed this opening, or merely gave it his name, is a matter on which sources differ (check).

Why a History Course?

- **It is a way into the history of cultures.** The game's route from India to Persia to Europe follows trade, conquest and learning (Chapters 2 and 3).
- **It is a way into the history of ideas.** The change in the rules around 1500 shows a society reshaping an inherited game (Chapter 4).
- **It is a way into modern history.** The world championship became entangled with politics (Chapters 7 and 8).
- **It is a way into the history of computing.** Chess was an early test for machines and is now a field where machines are far ahead (Chapter 9).
- **It has produced legends.** Stories of origin, of grains of rice or wheat doubled on each square, and of a hidden player inside a machine are all to be tested (Chapters 2, 9 and 10).

Myths to Test

Common claim	The question a careful reader asks (check each)
Chess is 4,000 years old.	What is the earliest evidence that is actually of chess? (Chapter 2)
A king rewarded the inventor with grains doubled on every square.	What is the oldest source for the story, and is it history or a lesson? (Chapter 2)
The queen has always been the strongest piece.	What did the piece do before the later fifteenth century? (Chapter 4)
The Turk was a thinking machine.	What was inside the cabinet? (Chapter 9)

Common claim	The question a careful reader asks (check each)
Chess players are all geniuses.	What do studies of strong players actually show? (Chapter 10)

Sources to Use

- **Survey histories.** H. J. R. Murray's *A History of Chess* (1913) is the classic; later work has revised parts of it (check which).
- **Museums.** The Lewis chessmen of the twelfth century are in the British Museum and the National Museum of Scotland (check which pieces are on display).
- **Manuscripts and early printed books.** From the later Middle Ages onward, texts on the game survive (check editions).
- **Federation records.** FIDE, the international federation founded in 1924 (check), holds the records of the modern world championship.
- **Game collections.** Large databases of games let a reader replay the great matches.

A British comparison

Scotland has a famous chess object: the Lewis chessmen, carved walrus-ivory pieces found on the Isle of Lewis in 1831 and thought to date from the twelfth century (check). Most are in the British Museum, with a group in the National Museum of Scotland in Edinburgh (check). They are a first-class source for how the game looked in medieval Europe, and Chapter 3 returns to them. Their kings, queens, bishops, knights and warders belong to a game before the rule changes of Chapter 4.

Not Yet Verified

The broad outline above (India, then Persia and the Islamic world, then Europe, with the major rule changes in the later fifteenth century) agrees with the general surveys consulted by web search. Exact dates for chaturanga, the explanation of its name, the origin of "checkmate", and details of the Lewis chessmen come from general knowledge and have not been checked against primary sources; treat every "(check)" accordingly.

Exercises

EXERCISE 1

In one paragraph, describe chess to someone who has never seen it: the board, the pieces and the aim.

→ Solution

EXERCISE 2

Write a short imagined account of a game, using at least six terms from the vocabulary table.

→ Solution

EXERCISE 3

Pick two claims from the "Myths to Test" table and say what evidence you would look for and where.

→ Solution

Quick Reference

- **Route:** India, Persia, the Islamic world, Europe
- **Names:** chaturanga, shatranj, chess
- **Turning point:** the new rules of the later fifteenth century
- **Method:** describe the story, check the dates, test the legends

The History of Chess

Course 13 · Chapter 2 · Chaturanga and Shatranj

The first chapter gave the broad route of the game. This chapter looks at its first two stages: chaturanga in India and shatranj in Persia and the Islamic world. The evidence is thin and often late, which makes it a good lesson in how historians weigh sources. Names, dates and details are flagged "check"; the broad outline agrees with general surveys, but individual claims have not been checked against primary texts.

Chaturanga in India

The name

Chaturanga is a Sanskrit word usually translated "four limbs" or "four divisions", and in Indian sources it also names the four parts of an army: elephants, chariots, cavalry and infantry (check).

The date

Surveys place the earliest chess-like game in northern India by about the sixth century CE, with some sources suggesting the fifth and others the seventh (check). The date is a range, not a fixed point.

The pieces

The pieces reflected the army: a king, a counsellor, elephants, horses, chariots and foot-soldiers. The elephant, horse and chariot are the ancestors of the bishop, knight and rook (check each).

Not a modern game

Early chaturanga was not played exactly as chess is now. The counsellor, ancestor of the queen, was a weak piece, and the elephant's move was short. Some scholars also think the earliest Indian form may have been played by four players, though this is debated (check).

From India to Persia

The game reached Persia, probably in the sixth or seventh century, where it was called *chatrang* in Middle Persian (Pahlavi). Several Persian texts mention it. The best known are:

Text (check each)	What it says	How to weigh it
The Karnamak of Ardashir	Describes the founder of the Sasanian dynasty as skilled at chatrang.	Often called the earliest literary mention, but the text is full of legend and its date is disputed. It shows the game was known when the text was composed, not when Ardashir lived.
The Book of Chess (*Mādayān ī chatrang*)	A story of an Indian challenge to the Persian court, solved by a clever courtier.	A Pahlavi text, thought to date from about the seventh century (check). Valuable, but a story rather than a record.
The Shahnameh	Ferdowsi's epic of about 1010 retells the story and adds a legend of two half-brothers who contest a throne in India.	Much later than the events, and told as legend.

> **A pattern to watch**
>
> The stories of how chess reached Persia are consistent in one respect: they say it came from India. That agreement is useful, but note that every telling comes from a later Persian or Arabic writer, with no Indian text of the same date to confirm it.

Shatranj in the Islamic World

After the Arab conquest of Persia in the seventh century, the game passed into the Islamic world, where the Persian name was adapted as *shatranj* (check). It was widely played in the courts and in cities, and it produced a literature of its own: problems, study positions and treatises written from about the ninth century (check).

Shatranj piece (check each)	Move	Modern descendant
Shah (king)	One square in any direction	King

Shatranj piece (check each)	Move	Modern descendant
Firzan or *ferz* (counsellor)	One square diagonally	Queen
Fil (elephant)	Two squares diagonally, jumping over a piece	Bishop
Faras (horse)	As the modern knight	Knight
Rukh (chariot)	As the modern rook	Rook
Baidaq (foot-soldier)	One square forward; captures diagonally; promotes to the counsellor	Pawn

The shatranj queen and bishop were short-range pieces, so the game was slower than the modern one. One result was a different idea of winning: a player could also win by capturing every piece but the king, and rules about stalemate differed (check). Here is a simple way to represent the shatranj pieces and their one-step movement in code, a tool for exploring the old rules.

Copy

```
# Shatranj: the short-range pieces, as (row, column) steps KING = [(dr, dc) for dr in (-1, 0, 1) for dc in (-1, 0, 1) if (dr, dc) != (0, 0)] FERZ = [(-1, -1), (-1, 1), (1, -1), (1, 1)] # one step diagonally FIL = [(-2, -2), (-2, 2), (2, -2), (2, 2)] # two steps diagonally, leaps def moves(pos, steps): r, c = pos return [(r + dr, c + dc) for dr, dc in steps if 0 <= r + dr < 8 and 0 <= c + dc < 8] print(moves((0, 2), FIL)) # the elephant in its starting corner
```

The Wheat Legend

A famous story says a ruler offered the inventor of the game any reward, and the inventor asked for one grain of wheat on the first square, two on the second, four on the third, and so on, doubling on each of the 64 squares. The total is $2^{64} - 1$, about 1.8×10^{19} grains, far more than any kingdom could supply (check). The arithmetic is sound. The story itself is a legend about exponential growth, attached to chess in medieval sources, and no one can show that it records a real event (check).

Evidence, Weighed

Claim (check each)	Evidence	Verdict
Chess began in India	Consistent later Persian and Arabic traditions; the name and piece types point to an Indian army; early finds of pieces	The usual view, though the details are thin and the date is a range
Chess is thousands of years old	Some very early boards and pieces have been called chess, but they are not clearly chess	Unproven; treat with caution
Ardashir played chess	A late and legendary text	Not reliable for the third century
Shatranj was widely played by the ninth century	Treatises, problems and later literary references	Well supported

A British comparison

The old shatranj pieces reached Britain only after they had changed. A good place to see what they became is the National Museum of Scotland in Edinburgh, which holds some of the Lewis chessmen (Chapter 3): there the counsellor has become a queen seated with her hand to her cheek, and the elephant has become a bishop (check). The word "rook" itself comes from the Persian and Arabic *rukh*, a link from the Islamic game to the English one (check).

Not Yet Verified

The web search consulted for this chapter agreed that the Karnamak is usually cited as the earliest literary mention of chatrang while remaining legendary and hard to date, that the Book of Chess is a separate seventh-century Pahlavi text, that the Shahnameh (c. 1010) retells the story, and that the game's name passes from Sanskrit through Persian to Arabic. The shatranj piece moves and dates, the four-player theory and the wheat legend's sources come from general knowledge and have not been checked against primary sources; treat every "(check)" accordingly.

Exercises

EXERCISE 1

Explain the route of the name from chaturanga to chatrang to shatranj, and say what the pieces of the Indian game represented.

→ Solution

EXERCISE 2

Calculate the number of grains on the 64th square of the wheat legend, and on all 64 squares together. Say why this makes the story a legend rather than a record.

→ Solution

EXERCISE 3

The Karnamak says Ardashir played chess. Give two reasons a historian would be cautious about using it as evidence for the third century.

→ Solution

Quick Reference

- **Names:** chaturanga (India), chatrang (Persia), shatranj (Arabic)
- **Old pieces:** shah, ferz, fil, faras, rukh, baidaq
- **Texts:** the Karnamak, the Book of Chess, the Shahnameh
- **Method:** note how late each source is, and whether it is story or record

The History of Chess

Course 13 · Chapter 3 · Chess Reaches Europe

By the ninth century shatranj was well established in the Islamic world (Chapter 2). This chapter follows it into Europe, where it was adopted by the church, the courts and the knightly class, and where its pieces took new names and new meanings. The best surviving witnesses are objects: the Lewis chessmen above all. Details are flagged "check"; the main facts about the Lewis find were checked against museum and reference pages found by web search.

Routes into Europe

Spain and Sicily

Under Muslim rule, Iberia and Sicily were points of contact between the Islamic and Christian worlds. Surveys point to these as an entry route by about the tenth century (check).

Byzantium and the East

The game also reached Europe through the Byzantine world and by trade routes across eastern Europe, where Russia and Scandinavia met the east (check).

Pilgrims, crusaders and merchants

Travellers carried the game too. By the eleventh century it was known in many European courts and monasteries (check), and Latin poems and treatises refer to it.

No single door

It is tempting to say chess "arrived" at a place and date. The evidence points instead to several routes over some centuries, with the dates of the first references varying by region. Be suspicious of any claim to the "first" chess in a country unless it names its source.

The Names Change

Shatranj piece	European name	Note (check each)
Shah	King	The root of "chess" and "check" through Old French.
Firzan	Queen, or *fers*, *dame*	A counsellor became a queen in many languages, though the piece still moved one square diagonally.
Fil	Bishop, *alfil*, *fol* or *archer*	Names for the elephant varied widely, from a bishop in English to a jester in French.
Faras	Knight	A horseman became a knight.
Rukh	Rook	Kept the Persian and Arabic name; the shape in Europe became a tower.
Baidaq	Pawn	From the word for a foot-soldier.

The Lewis Chessmen

The best-known medieval chess pieces were found in 1831 on the Isle of Lewis in the Outer Hebrides, at or near Uig (check the exact find-spot: sources differ and the details of the find are disputed). They are carved mostly in walrus ivory, with some in whale's tooth, and are usually dated to the twelfth century, with the British Museum giving about 1150 to 1200 for many of them (check). In all, about 93 pieces are normally counted, including chessmen, plain draughts-type pieces and a buckle, but sources give different totals and some reports suggest more (check).

Question	What is known (check each)
Where are they now?	Most are in the British Museum in London. A group of eleven is in the National Museum of Scotland in Edinburgh.
Who made them?	They are generally described as Scandinavian work, often connected with Norway and perhaps Trondheim, but where they were carved is debated.
Why were they on Lewis?	Not known. At the time the Western Isles were under Norwegian rule. A merchant's stock lost on the way to Ireland is one suggestion, among others.
How many sets?	Several sets, probably four, are mixed together in the find.

What the Pieces Show

- **The king** sits enthroned with a sword across his knees.
- **The queen** sits with her hand to her cheek, a pose often read as thoughtful or worried.
- **The bishop** wears a mitre. The shatranj elephant has become a churchman, so the church's world has entered the game.
- **The knight** rides a small horse with spear and shield.
- **The rook** is a standing warrior (a "warder") in some sets, who bites his shield in some figures. These figures are often linked to Norse berserkers, though that identification is uncertain (check). In later chess the rook becomes a tower.
- **The pawns** are small geometric shapes, not people.

As evidence these pieces are rich. They show the pieces of Chapter 2 re-interpreted in the Christian and feudal world of north-western Europe: king, queen, bishop, knight, warder and pawn. They also show that the game was in the twelfth century a high-status object. But they tell us nothing about the rules in use, which have to come from texts.

Early European Rules

Early European chess was still close to shatranj. The pieces moved by the old rules. Players had their own local variations, and rules were not standardised (check). European writers also used the game as a moral and social allegory. A well-known example is a thirteenth-century treatise by a Dominican friar, Jacobus de Cessolis, which explains each piece as a member of society: king, queen, bishop, knight and so on (check). The treatise was copied and translated widely, which is a sign of how deeply the game had entered medieval culture.

A short script can list the pieces and their medieval roles as a lookup table, a way to practise the vocabulary.

Copy

```
# Shatranj names and their European descendants pieces = { "shah": "king", "firzan": "queen", "fil": "bishop", "faras": "knight", "rukh": "rook", "baidaq": "pawn", } for old, new in pieces.items(): print(f"{old:8} -> {new}")
```

Evidence, Weighed

Claim (check each)	Evidence	Verdict
Chess came to Europe through Spain	Contact with Islamic Spain; early references	Likely one route, not the only one
The Lewis pieces were made in Norway	Style, Scandinavian parallels, trade in walrus ivory	Probable but debated
The rooks are berserkers	Their biting of shields	A suggestion, not proven
The Lewis pieces show how the game was played	They show the pieces, not the rules	Overstated

A British comparison

The Lewis chessmen are a Scottish story that is also a British Museum story: the pieces were bought for the museum in London in 1831-32, while a smaller group went to Edinburgh (check). That division has been a source of discussion in Scotland ever since, and some of the pieces have been shown on loan in Lewis itself (check). If you can, compare the Edinburgh pieces with the London pieces in person and look at the faces.

Not Yet Verified

A web search agreed on the main facts of the Lewis find: discovered in 1831 on the Isle of Lewis, walrus ivory and some whale's tooth, usually dated to the twelfth century, most in the British Museum and eleven in the National Museum of Scotland, with debate over the exact find-spot, the number of pieces and where they were carved. The routes into Europe, the piece names, the Cessolis treatise and the berserker reading come from general knowledge and have not been checked against primary sources; treat every "(check)" accordingly.

Exercises

EXERCISE 1

Explain why the evidence for chess reaching Europe points to several routes rather than a single date and place.

→ Solution

EXERCISE 2

Choose two Lewis pieces and say what each shows about the medieval world and what it cannot show about the rules of the game.

→ Solution

EXERCISE 3

Extend the lookup script so that it also prints how each piece moved in shatranj, and describe the output for the queen.

→ Solution

Quick Reference

- **Routes:** Spain and Sicily, Byzantium and the east, travellers
- **Lewis chessmen:** found 1831, twelfth century, mostly walrus ivory, London and Edinburgh
- **New names:** firzan to queen, fil to bishop, faras to knight
- **Method:** objects show pieces and status; only texts show rules

The History of Chess

Course 13 · Chapter 4 · The New Rules

For some seven centuries the game changed slowly. Then, in the later fifteenth century, in southern Europe, its rules were changed in a few decades so that the queen and bishop became the long-range pieces of today and play became much faster. This chapter describes the change, the texts that record it and the debate about its dating. The outline was checked by web search; individual claims are flagged "check".

Before and After

Piece or rule	Old (shatranj style)	New (from the late fifteenth century)
Queen	One square diagonally	Any distance in any straight or diagonal line
Bishop	Two squares diagonally, leaping	Any distance diagonally, without leaping
Pawn's first move	One square	One or two squares; capture "in passing" (en passant) follows
Castling	Various local king moves	King and rook move together, with fixed rules
Promotion	Pawn becomes the weak counsellor	Pawn may become a queen, later also another piece
Pace	Slow, strategic	Fast, tactical, attacking

All entries are the usual summary and individual details varied by region and period (check).

The biggest change in the history of the game

Giving the queen the power of rook and bishop together changed the character of chess more than any other single rule. Attacks and mating threats came quickly, and openings became sharper. Surveys describe this as the point at which modern chess begins (check).

Where and When

Valencia

The printed book

The early texts that show the new moves come from the Kingdom of Valencia, in eastern Spain, in the 1470s to 1490s. A poem on chess and love, *Scachs d'amor*, written about 1475 in Catalan, is the early text most often cited (check).

Francesc Vicent's *Llibre dels jochs partitis dels schachs* was printed in Valencia in 1495, and is often described as the earliest printed chess book. No copy is known to survive (check).

Spreading

A Spanish book by Luis Ramirez de Lucena, printed about 1497, and an Italian work by Damiano in 1512 helped carry the new game across Europe (check).

Why the Queen?

Why did the weakest piece become the strongest? The answer is not known. Proposals include:

- **A courtly world.** Queens and queenly figures carried great prestige in late medieval courts, and the piece named for a queen may have gained in power with her status (check).
- **The pawn's promotion.** If a pawn which reaches the far side becomes a counsellor, a strong promoted piece is a stronger incentive. Some scholars see promotion and the queen's power as parts of one change (check).
- **A wish for speed.** Players tired of long, slow games, and the new rules rewarded attack.

The first and the third are guesses. No text explains the decision, and a historian should state that plainly.

A pattern to watch

The change did not happen on one day in one place. The new moves were first recorded in a handful of texts, and for a time old and new rules existed side by side, with the new game called "chess of the queen" or "mad queen chess" in some later descriptions (check). Wherever an account says "the rules were changed in a year", look for the text.

Reading a Position

One way to feel the difference is to count the squares a lone piece controls. The script below counts the moves of a rook-and-bishop queen on an empty board, against the old one-step counsellor.

Copy

```
# Squares reached from (row, col) on an empty 8x8 board def old_queen(r, c): steps = [(-1, -1), (-1, 1), (1, -1), (1, 1)] return [(r + a, c + b) for a, b in steps if 0 <= r + a < 8 and 0 <= c + b < 8] def new_queen(r, c): dirs = [(a, b) for a in (-1, 0, 1) for b in (-1, 0, 1) if (a, b) != (0, 0)] out = [] for a, b in dirs: i, j = r + a, c + b while 0 <= i < 8 and 0 <= j < 8: out.append((i, j)) i, j = i + a, j + b return out print(len(old_queen(3, 3)), len(new_queen(3, 3))) # 4 and 27
```

Evidence, Weighed

Claim (check each)	Evidence	Verdict
The new rules arose in Spain	Valencian texts of the 1470s and 1490s	The best-supported view, though the dating is debated
Scachs d'amor is the first record of the new queen	A poem, so a literary rather than a technical source	Important, but dating and reading are disputed
Isabella of Castile caused the change	A popular story linking the strong queen to the queen of Spain	No firm evidence; a legend
All Europe changed at once	Spanish and Italian works; slow adoption elsewhere	False; adoption took decades

A British comparison

Britain took the new game in the sixteenth and seventeenth centuries, not at once. In Scotland and England the queen had reached full power by the time of the first English printed chess books (check), and in Edinburgh a Lewis queen of the old game can be seen beside the later idea of the strong queen in the National Museum of Scotland's displays of chess and games, if they are on view (check).

Not Yet Verified

A web search agreed on the main outline: the new queen and bishop rules are recorded in Valencia in the later fifteenth century, in the poem Scachs d'amor of about 1475, in Vicent's book of 1495, and spread by Lucena and Damiano, with historians still arguing about the exact dating. The search found no source for the term "mad queen" or for the story about Isabella of Castile as a cause. The table of rule changes, the reasons suggested, and the British note come from general knowledge and have not been checked against primary sources; treat every "(check)" accordingly.

Exercises

EXERCISE 1

List three rule changes of the later fifteenth century and say how each changed the character of the game.

→ Solution

EXERCISE 2

Explain why the story that Isabella of Castile caused the strong queen should be treated as a legend, and say what evidence would change your mind.

→ Solution

EXERCISE 3

Run the move-counting script for the corner square (0, 0) and the centre (3, 3), and explain the difference in the results.

→ Solution

Quick Reference

- **Where:** Valencia, 1470s to 1490s; then Spain, Italy, Europe

- **Texts:** Scachs d'amor, Vicent (1495), Lucena, Damiano
- **Changes:** strong queen, long-range bishop, two-square pawn, castling
- **Method:** separate what the texts say from why we think it happened

The History of Chess

Course 13 · Chapter 5 · Masters and Theory

Once the new rules had settled (Chapter 4), players began to write down what they had learned. Between the sixteenth and the mid-nineteenth century, chess grew a literature of openings, endgames and principles, and a succession of masters whose ideas still shape how the game is taught. This chapter follows that story from Ruy López to the Romantic attackers. Only some points were confirmed by web search; the rest comes from general knowledge and is flagged "check".

The First Printed Theory

Ruy López (1561)

A Spanish priest whose *Libro de la invención liberal y arte del juego del axedrez* was printed in 1561 and is described by Britannica as the first modern chess manual. The opening named after him, 1.e4 e5 2.Nf3 Nc6 3.Bb5, was not his invention; he recommended the line (check).

Italian masters

In the sixteenth and seventeenth centuries Italian players such as Giulio Cesare Polerio and Gioachino Greco led the game, and their manuscripts collected openings and traps (check). Italy was then the strongest chess nation.

Spread by print

Printing let ideas travel faster than before. A player in one country could study the analysis of a master in another, and local rules gave way to a common game (check).

Opening names are labels, not credits

Many opening names honour a writer who analysed a line rather than the player who first used it. Treat a name as a label for the line, and check who really introduced it before telling anyone that a master "invented" it.

Philidor and the Idea of Structure

In the eighteenth century the French player and composer François-André Danican Philidor published *L'analyse du jeu des Échecs* in 1749 (check). He is best remembered for stressing the importance of the pawns, in a line often quoted as "the pawns are the soul of chess" (check, and the exact wording varies). His idea was that pawn structure decides the shape of a game and that pieces should support pawn play, in contrast to the pure piece attacks that most players then preferred. He was also a well-known composer of music, a combination that fits the period's view of chess as a polite art (check).

The Romantic Era

Master (check each)	Period	Known for
Adolf Anderssen	Mid nineteenth century	Brilliant sacrificial attacks; winner of the first international tournament, London 1851 (Chapter 6). His win against Lionel Kieseritzky in 1851 is nicknamed the "Immortal Game".
Paul Morphy	About 1857 to 1859	An American prodigy who beat the leading European players in 1858-59, notably Anderssen, and then largely gave up serious play.
Wilhelm Steinitz	Later nineteenth century	Turned attack into a science of accumulating small advantages; first official world champion (Chapter 7).

The "Romantic" label is applied later and refers to the attacking, sacrificial style of the age, in which the gambit was the favourite opening and a brilliant sacrifice was admired more than a sound win (check).

> **A pattern to watch**
>
> History tends to keep the brilliant games and forget the failures. Our idea of what players of the Romantic age thought good chess is partly shaped by which games were published and anthologised. Ask what a book leaves out.

Material Counting: A Small Tool

Theory is full of numbers; the most basic are the point values that beginners learn: pawn 1, knight 3, bishop 3, rook 5, queen 9 (check; these are conventions, not rules). The script below counts material from a position written in FEN, a common text format for positions (check). It was run to produce the output shown.

Copy

```
VALUES = {"p": 1, "n": 3, "b": 3, "r": 5, "q": 9} def material(fen): board = fen.split()[0] white = sum(VALUES[ch.lower()] for ch in board if ch.isupper() and ch.lower() in VALUES) black = sum(VALUES[ch] for ch in board if ch.islower() and ch in VALUES) return white, black start = "rnbqkbnr/pppppppp/8/8/8/8/PPPPPPPP/RNBQKBNR w KQkq - 0 1" print(material(start)) # (39, 39) # After 1.e4 e5 2.Nf3 Nc6 3.Bb5 a6 4.Bxc6 dxc6 ruy = "r1bqkbnr/1pp2ppp/p1p5/4p3/4P3/5N2/PPPP1PPP/RNBQK2R w KQkq - 0 5" print(material(ruy)) # (36, 36)
```

After the exchange of bishop for knight, each side has lost 3 points, so material is level, but the pawn structures have changed: Black has doubled pawns on the c-file, the kind of structural fact that later theorists such as Philidor and Steinitz taught players to value (check).

Evidence, Weighed

Claim (check each)	Evidence	Verdict
Ruy López invented the Ruy Lopez	His 1561 book recommends the line; earlier mentions exist	Name, not invention
Philidor said pawns are the soul of chess	Widely quoted, wording varies	Plausible; check the source of the exact words
The Romantic masters played without defence	Anthologised brilliancies	Exaggerated; selection bias
Morphy was never beaten	He won his matches and then withdrew	Misleading; he lost some games

> **A British comparison**
>
> Britain contributed to this period too. Howard Staunton, an Englishman, was widely regarded as the leading player in Europe around 1843 to 1851 and organised the 1851

London tournament (Chapter 6) (check). Staunton's name is on the standard tournament piece design (also Chapter 6). The Scottish city of Edinburgh and its chess clubs belong to this story, though the details are not covered here.

Not Yet Verified

A web search confirmed that Ruy López's book appeared in 1561, was described by Britannica as the first modern chess manual, that the opening was not his invention, and that Morphy played the 3...a6 defence against Anderssen in 1858. It found nothing on Philidor's book or the famous quotation, and only a weak mention of the Immortal Game. The Italian masters, Philidor, Anderssen, Morphy, Steinitz and Staunton details come from general knowledge and have not been checked against primary sources; treat every " (check)" accordingly.

Exercises

EXERCISE 1

Explain in a paragraph why an opening's name may not tell you who invented it, using the Ruy Lopez as your example.

→ Solution

EXERCISE 2

Describe the difference between Philidor's idea of chess and the Romantic attacking style, and say why a historian should be careful with the label "Romantic".

→ Solution

EXERCISE 3

Use the material-counting script on a position of your own (for example after a bishop captures a knight and a pawn recaptures) and explain what the result does and does not tell you.

→ Solution

Quick Reference

- **Texts:** Ruy López (1561), Philidor (1749)
- **Masters:** Anderssen, Morphy, Steinitz, Staunton
- **Styles:** structure (Philidor), attack (Romantic), accumulation (Steinitz)
- **Method:** names are labels; beware selection in anthologies

The History of Chess

Course 13 · Chapter 6 · Clubs, Coffeehouses and Tournaments

The masters of Chapter 5 played in particular places: coffeehouses, clubs and private houses. In the nineteenth century those places turned into organisations, with rules, publications and contests between nations, and the game acquired the equipment and the measurements of a modern sport. This chapter follows that change. The London tournament of 1851 was checked by web search; the rest comes from general knowledge and is flagged "check".

From Coffeehouse to Club

Coffeehouses

In the eighteenth and early nineteenth centuries chess was played for stakes and company in coffeehouses and cafes, in London, Paris and Vienna (check). Famous examples include the Café de la Régence in Paris, where Philidor played (check).

Clubs

Dedicated chess clubs formed from the later eighteenth century, with London clubs prominent. Clubs organised matches by letter and, later, by telegraph, and made rules for play (check).

The press

Chess columns in newspapers and magazines, and periodicals devoted to chess, spread problems, game scores and news (check). Howard Staunton edited a leading magazine and wrote a newspaper column (check).

London, 1851

The turning point is usually given as the tournament held in London in 1851, timed to coincide with the Great Exhibition. Howard Staunton conceived and organised it; it is generally called the first international chess tournament. Sixteen players took part, and it was played as a series of short knockout matches. The winner was Adolf Anderssen of Germany, who beat Staunton 4-1 in

the final stages, and who was widely regarded afterward as the strongest player in the world. The tournament began on 26 May 1851 (details from the sources consulted; check).

Why 1851 matters

Before 1851 a "strongest player" was whoever was widely thought to be, from challenge matches and reputation. London showed that players from several countries could be brought together under common rules and a common result. The story of ratings, championships and federations in the next chapters begins here.

The Equipment Changes

Item (check each)	Change
Staunton pattern pieces	A standard design registered in 1849 and promoted by Staunton, with a clear shape for each piece so that players of any nation could recognise them. It became the tournament standard. The design details and credit are disputed (check).
Chess clocks	Before clocks, a slow player could stall. Sand glasses and then mechanical double clocks were introduced in the later nineteenth century, with an early use commonly cited at London in 1883 (check).
Notation	Descriptive notation was used for English-language chess for a long time; algebraic notation (Chapter 1) has been standard internationally for most of the modern period (check).
Telegraph matches	Games played between distant cities by telegraph, then later by radio and internet (check).

A pattern to watch

The clock changed how the game was played as well as how it was timed. Time pressure became part of the contest, and the slow, deliberate players had to adapt. When a new tool arrives, ask what it changed in the activity as well as what it measured.

The Mathematics of Ratings

As competition grew, organisers wanted a way to compare players who had never met. The system most used is the Elo rating, devised by the Hungarian-born American physicist Arpad Elo and adopted by the international federation in 1970 (check). It predicts the expected score of a player from the rating gap, and updates ratings after each game. The script below implements the expected-score formula and a simple update with a K-factor of 20 (the value varies by federation and rating; check). It was run to produce the output shown.

Copy

```
def expected(ra, rb): return 1 / (1 + 10 ** ((rb - ra) / 400)) def update(ra, rb, score_a, k=20): ea = expected(ra, rb) return (ra + k * (score_a - ea), rb + k * ((1 - score_a) - (1 - ea))) print(round(expected(2000, 2000), 2)) # 0.5 print(round(expected(2200, 2000), 2)) # 0.76 print(update(2000, 2000, 1)) # (2010.0, 1990.0)
```

A player 200 points higher is expected to score about 0.76 per game, that is, to win roughly three games in four if there are no draws. The formula is a model, with assumptions about how results are distributed, and rating points cannot be compared across different systems or periods without care (check).

Evidence, Weighed

Claim (check each)	Evidence	Verdict
London 1851 was the first international tournament	Sources describe it as such; earlier international matches existed	Reasonable, with "tournament" doing the work
Anderssen became the world champion in 1851	He was regarded as strongest, but there was no title	Unofficial only (Chapter 7)
Staunton designed the pieces	His name is on the pattern; the designer is disputed	Promoter, not necessarily designer
Ratings measure ability exactly	A statistical model	An estimate with error

A British comparison

London is at the centre of this chapter: it hosted the 1851 tournament, and the Staunton pattern is named after an Englishman (check). Scotland had its own clubs, and a chess club in Edinburgh is among the older ones in the country, though its exact founding date is not given here (check). If you play today in a British club, the pieces on the board will almost certainly be of the Staunton pattern.

Not Yet Verified

A web search confirmed the main facts of London 1851: organised by Staunton, sixteen players, knockout matches, Anderssen the winner, beating Staunton 4-1, begun on 26 May 1851 to coincide with the Great Exhibition. It found nothing on the Staunton pattern's design history or the 1883 clock, which, with the coffeehouses, clubs, notation and the Elo history, come from general knowledge and have not been checked against primary sources; treat every "(check)" accordingly.

Exercises

EXERCISE 1

Explain in a paragraph why London 1851 is usually treated as a turning point, and what it did not yet establish.

→ Solution

EXERCISE 2

Choose one item of chess equipment (pieces, clock, notation) and describe the problem it solved and one thing it changed about the game.

→ Solution

EXERCISE 3

Use the rating script to find the expected score of a 1800 player against a 2000 player, and the new ratings if the lower-rated player wins.

→ Solution

Quick Reference

- **Places:** coffeehouses, clubs, the press
- **1851:** London, Staunton organiser, Anderssen winner
- **Equipment:** Staunton pattern, clocks, algebraic notation
- **Ratings:** Elo, expected score from the rating gap

The History of Chess

Course 13 · Chapter 7 · World Champions

After London 1851 (Chapter 6), the question "who is the best?" became formal. This chapter follows the title of world champion from its start in 1886 to the present, and shows how a title that began as a private agreement between two players became an institution run by a federation. The sequence of champions was checked by web search, though most sources found were popular rather than official; other details are flagged "check".

The First Champion

Steinitz, 1886

The title of world champion is usually dated from 1886, when Wilhelm Steinitz beat Johannes Zukertort in a match generally treated as the first world championship. Steinitz held it until 1894. He had earlier been seen as the leading player, so the title formalised a reputation (check).

Lasker, 1894 to 1921

Emanuel Lasker took the title from Steinitz and held it for 27 years, the longest reign on record. He was also a mathematician (check).

Capablanca, 1921 to 1927

The Cuban José Raúl Capablanca beat Lasker in 1921 and lost to Alexander Alekhine in 1927 (check).

A title owned by the champion

Before the Second World War there was no body in charge of the title. The champion decided whom to play, on what terms and for what stake, which meant he could, and sometimes did, avoid a dangerous challenger. The title went with the person, not with an institution (check).

The Title Passes to FIDE

Event (check each)	What happened
Alekhine, 1927 to 1935	Alekhine beat Capablanca in 1927 and lost the title to the Dutchman Max Euwe in 1935.
Alekhine, 1937	Alekhine won the title back from Euwe in a return match.
Alekhine's death, 1946	He died while still champion, leaving the title vacant.
The 1948 tournament	FIDE, founded in 1924, organised a five-player tournament to decide the successor. Mikhail Botvinnik won it, and from then on FIDE controlled the cycle of qualifiers and challenge matches.
Later champions	Smyslov (1957 to 1958), Tal (1960 to 1961), Petrosian, Spassky, Fischer, Karpov, Kasparov, Kramnik, Anand, Carlsen, then Ding Liren (2023) (check).

Botvinnik's reigns were interrupted by the loss of the title to Smyslov in 1957 and to Tal in 1960, each followed by a rematch; lists differ on how they count these (check). The 1948 tournament marks the point at which the title moved from a personal possession to a federation-run championship.

The Split of 1993

In 1993 the reigning champion Garry Kasparov and his challenger Nigel Short, an English player, left FIDE to hold their match under a new organisation, the Professional Chess Association. FIDE named its own champion, and for about thirteen years there were two competing world titles. They were reunited in 2006 by a match between Vladimir Kramnik and Veselin Topalov (check). The episode shows that a title is only as strong as the agreement of the players to recognise it.

> **A pattern to watch**
>
> The championship is a story about who controls a prestige title. Whenever the champion, the federation, a sponsor or a government wants different things, the title becomes a political object. Look at who benefits when a title changes its rules.

Reign Lengths: A Small Check

The claim that Lasker held the title longest is easy to test from a list of reigns. The script below stores the first three champions and computes their reigns. It was run to produce the output shown.

Copy

```
# (name, first year as champion, year the reign ended) reigns = [ ("Steinitz", 1886, 1894), ("Lasker", 1894, 1921), ("Capablanca", 1921, 1927), ] for name, start, end in reigns: print(f" {name:11} {end - start:2} years") longest = max(reigns, key=lambda r: r[2] - r[1]) print("Longest:", longest[0]) # Steinitz 8 years, Lasker 27 years, Capablanca 6 years; Longest: Lasker
```

Calendar years are a rough measure: the exact dates of the matches fall within the years, and a full table of all champions would need the matches' months and the break between 1946 and 1948 (check).

Evidence, Weighed

Claim (check each)	Evidence	Verdict
Steinitz was the first world champion	The 1886 match is usually treated as the first official title match	Accepted convention; earlier "champions" were informal
Lasker held the title longest	27 years, 1894 to 1921, in standard lists	Well supported
FIDE has always run the title	FIDE took control in 1948	False; before that it was personal
There has always been one champion	The 1993 split lasted until 2006	False

A British comparison

The 1993 split was a British story as well as a world one: the challenger Nigel Short, from England, reached the final by beating former world champions in the qualifiers, and the match was played in London (check). Short's challenge is often called the high point of British chess in the modern period. Earlier, in the nineteenth century, British players such as Howard Staunton and Joseph Blackburne, the latter nicknamed "the Black Death" for his play, were among the strongest in the world (check).

Not Yet Verified

A web search gave a consistent core sequence of champions (Steinitz in 1886, Lasker for 27 years, Capablanca in 1921, Alekhine in 1927, Euwe in 1935, Alekhine again in 1937, the 1948 tournament won by Botvinnik, Smyslov, Tal, Carlsen and Ding Liren in 2023), but the sources were popular blogs, not official records, and they disagree on details of the Botvinnik reigns. The 1993 split and reunion, the identities of later champions and the Short and Blackburne notes come from general knowledge and have not been checked against primary sources. The title may have passed again since the 2023 match; check a current source. Treat every "(check)" accordingly.

Exercises

EXERCISE 1

Explain what changed in 1948 and why it mattered for who could challenge the champion.

→ Solution

EXERCISE 2

Describe the split of 1993 in a short paragraph and say what it shows about how a title gets its authority.

→ Solution

EXERCISE 3

Add Alekhine's first reign (1927 to 1935) to the script and say what the output shows, and what a calendar-year count leaves out.

→ Solution

Quick Reference

- **First champion:** Steinitz, 1886; longest reign: Lasker, 27 years
- **1948:** FIDE takes control after Alekhine's death
- **1993 to 2006:** two rival titles
- **Method:** ask who controls the title and who recognises it

The History of Chess

Course 13 · Chapter 8 · Cold War Chess

From 1948 to 1972 every world champion was Soviet (Chapter 7). Then an American challenger broke the sequence in a match that the world's press treated as a battle between two systems. This chapter looks at the Soviet chess school, the 1972 match in Reykjavik, and what the story does and does not show. The 1972 match result was checked by web search; much else is from general knowledge and flagged "check".

The Soviet Chess School

State support

The Soviet state treated chess as a cultural and educational activity. It supported clubs, trainers, youth schools, books and magazines, and gave leading players a salary and status (check).

Method

Soviet trainers developed systematic study of openings, endgames and the analysis of adjourned games, and players worked in teams of seconds and analysts (check). Mikhail Botvinnik is often credited with building the method and training the next generation (check).

Results

After 1948 a Soviet player held the title for decades, and Soviet teams dominated the international team events (check). Whether the system or the size of the player pool did more is a fair question.

Excellence and propaganda

Chess suited the Cold War. It had no hidden variables and no luck, so it could be presented as a pure contest of minds, and the result was easy to understand: one side won. Both governments saw that a win would be read as more than a win (check).

Reykjavik, 1972

The champion was Boris Spassky of the Soviet Union. His challenger was Bobby Fischer of the United States, a player of extraordinary strength and a difficult temperament. The match was played in Reykjavik, Iceland, in July and August 1972, a choice that was itself notable since earlier title matches had been held in the Soviet Union. Fischer lost the first game and forfeited the second, after disputes about conditions, and was two games behind before the match settled. He then won steadily. Spassky resigned the 21st game, by telephone, on 1 September 1972. The final score was 12.5 to 8.5 in Fischer's favour (details from the sources consulted; check).

Item (check each)	Detail
Result	Fischer 12.5, Spassky 8.5
Games	21: Fischer seven wins, Spassky three (one by forfeit), eleven draws
Meaning	Fischer became the eleventh world champion and the first American
Prize	A record purse for chess at the time, greatly increased after Fischer's demands (check)

> **A pattern to watch**
>
> The press called it the "match of the century" and framed it as East against West. Players and officials had more mixed motives, including money, personalities and conditions of play. When a contest is described as a symbol, ask what it also was as a contest and as a business.

Checking the Score

A match score is simple arithmetic: a win counts one point, a draw half a point. The script below checks that the published game counts give the published result. It was run to produce the output shown.

Copy

```
def score(wins, draws): return wins + draws / 2 fischer_wins, spassky_wins, draws = 7, 3, 11 games = fischer_wins + spassky_wins + draws print(games) # 21 print(score(fischer_wins, draws), score(spassky_wins, draws)) # 12.5 8.5 print(score(fischer_wins, draws) > games / 2) # True
```

The two scores add to 21, the number of games, and Fischer's total passes the 10.5 points that decide a match of 21 games. The check supports the reported figures. It does not tell us which game counts were counted with the forfeits (check).

After Reykjavik

- **Fischer's withdrawal.** In 1975 Fischer did not defend the title against Anatoly Karpov because the federation would not accept all of his conditions, and Karpov became champion by default (check).
- **The Karpov and Kasparov era.** The Soviet hold on the title returned with Karpov, followed by Garry Kasparov from 1985, whose long rivalry with Karpov dominated the 1980s (check).
- **The end of the system.** After the Soviet Union ended in 1991, its trainers and players spread across the world, and the old state support disappeared (check).

Evidence, Weighed

Claim (check each)	Evidence	Verdict
Fischer beat the whole Soviet system	He beat one champion; he also had help and preparation	A simplification
The match was decided by politics	The result was decided by games, but the setting was political	Overstated
Soviet dominance was due to state support	Training systems, a large player pool, prestige	Probably a large part, not a proven whole
Chess was a minor sport before 1972	Large public interest in the match	The match did increase interest, notably in the United States

A British comparison

The British role in this period was a supporting one, until 1993. In 1972 a British businessman, James Slater, added money to the prize fund to help the match go ahead after Fischer's complaints about the prize (check). Britain also supplied strong players such as Raymond Keene and Tony Miles, the latter becoming a grandmaster in the 1970s

(check). The match did raise interest in chess in Britain, and chess clubs and books enjoyed a boom (check).

Not Yet Verified

A web search confirmed the 1972 match result of 12.5 to 8.5, the 21 games, the telephone resignation on 1 September 1972, the game counts and Fischer as the first American champion and eleventh in the line; it found one source noting that title matches had been held in the Soviet Union. It did not cover the Soviet chess school, Fischer's 1975 forfeit, Kasparov's 1985 title, the Slater prize money or the British players, all of which come from general knowledge and have not been checked against primary sources. Treat every " (check)" accordingly.

Exercises

EXERCISE 1

Give three reasons the Soviet Union was so successful at chess, and say which is best supported by evidence.

→ Solution

EXERCISE 2

Why is "Fischer beat the whole Soviet system" a simplification? Write two sentences saying what is true in it and what is not.

→ Solution

EXERCISE 3

A 24-game match ends 6 wins to 4 with 14 draws. Use the score function to find each player's total and say who wins and why.

→ Solution

Quick Reference

- **1972:** Reykjavik, Fischer 12.5, Spassky 8.5
- **Soviet school:** state support, systematic training, a large player pool
- **After:** Fischer's withdrawal, Karpov, Kasparov, the end of the Soviet system
- **Method:** separate the contest from the symbol

The History of Chess

Course 13 · Chapter 9 · Machines

People have wanted machines to play chess for over two and a half centuries, partly because the game seemed to need intelligence. This chapter follows the story from a famous fake, the Turk, through early computer programs and the Deep Blue match of 1997, to modern engines and online play. The main results were checked by web search; other details are flagged "check".

The Turk

The machine

In 1770 Wolfgang von Kempelen unveiled in Vienna a chess-playing automaton, a figure in Turkish dress sitting behind a cabinet, known as the Turk. It toured Europe and later America for decades (check).

The secret

It was not a thinking machine. Sources agree that a concealed human player operated it from inside the cabinet, using mechanisms to follow the game and move the arm (check).

The lesson

The Turk raised the question of whether a machine could think, 250 years before the answer began to matter. It is an early example of an apparent machine that hid human work, a pattern that has recurred (check).

Hidden labour

The Turk is often told as a story of trickery. It is also a story of a skilled human whose work was made invisible so that it could look like a machine's. Ask of any impressive automatic system who or what is doing the work.

Computers Learn to Play

Stage (check each)	What happened
1940s to 1950s	Pioneers including Alan Turing and Claude Shannon described how a machine might play, by searching moves and scoring positions. Turing wrote a program on paper before there was a machine able to run it (check).
1950s to 1970s	Early programs played weak games on small boards or with simplified rules, then improved as computers did (check).
1980s to 1990s	Special-purpose hardware and deeper search made programs strong enough to beat masters (check).
1996 and 1997	IBM's Deep Blue played Garry Kasparov twice (below).
2000s onward	Programs on ordinary computers became stronger than any human; engines were used by players to prepare and analyse (check).

Deep Blue and Kasparov

In 1996 Kasparov beat Deep Blue 4-2 in a six-game match in Philadelphia, though the machine won one game. A year later, in 1997, an upgraded Deep Blue won the rematch 3.5 to 2.5. The sources consulted report that in the deciding game Kasparov resigned after only 19 moves (check). It was the first time a reigning world champion lost a match to a computer under standard conditions. Kasparov afterward questioned the conditions, including the lack of access to the machine's earlier games, and the question of fairness was debated (check).

Engines Beyond Human Knowledge

Traditional engines, such as Stockfish, search millions of positions with hand-built scoring rules. A different approach came in 2017 with AlphaZero from DeepMind, which taught itself chess from the rules alone by playing against itself. In a reported match it beat a leading traditional engine with 28 wins, no losses and 72 draws over 100 games (check; the engine version and conditions were criticised). The arithmetic of that result is easy to check:

Copy

```
def points(wins, draws): return wins + draws / 2 # AlphaZero against Stockfish, as reported: 28 wins, 72 draws, 0 losses games = 28 + 72 + 0 print(games, points(28, 72), points(0, 72)) # 100 64.0 36.0 # Deep Blue against Kasparov, 1997: 3.5 to 2.5 over six games print(3.5 + 2.5) # 6.0
```

The score of 64 to 36 matches the 28-0-72 record, and the Deep Blue score adds up to the six games played. The code checks the sums. It cannot say whether the match conditions were fair (check).

Online Chess

- **Internet play.** From the 1990s, servers let people play anyone in the world at any hour, and by the 2010s millions played every day (check).
- **Cheating.** Engines made cheating by consulting a program a real problem, in online play and in tournaments, and organisers use statistical methods and rules about devices to detect it (check).
- **Training.** Players of every level use engines to analyse their games, and the best prepare opening lines many moves deep with engine help (check).
- **The pandemic and popular media.** Online chess and streaming grew sharply around 2020 (check).

> **A pattern to watch**
>
> Each stage changed what "playing well" means. Once a machine is the strongest player, the human question shifts from "who is best?" to "how do people play, learn and enjoy the game?" The history of chess machines is partly a history of redefining what is valuable about the human game.

Evidence, Weighed

Claim (check each)	Evidence	Verdict
The Turk was a genuine machine	A human operator was hidden inside	False
Deep Blue beat Kasparov in 1997	3.5 to 2.5 over six games	Well supported

Claim (check each)	Evidence	Verdict
Machines have solved chess	They are very strong, but the game is not fully solved	False
Machines killed human chess	Participation and interest have grown	False

A British comparison

Britain had a hand in the beginning of the story: Alan Turing, born in London and later working at Manchester, wrote an early chess-playing procedure on paper in about 1948 and tested it by hand, taking the part of the machine himself (check). He is also associated with Bletchley Park, where wartime codebreaking took place. Scotland connects through the University of Edinburgh, a centre for early artificial-intelligence research in Britain (check).

Not Yet Verified

A web search agreed that the Turk was unveiled in 1770 and operated by a hidden human, that Deep Blue won the 1997 match 3.5 to 2.5 (Kasparov having won in 1996, 4-2), and that AlphaZero reportedly beat Stockfish with 28 wins, 72 draws and no losses in 2017. It found nothing on the exact engine versions and match conditions. Turing's paper program, the early history, online chess and the Edinburgh note come from general knowledge and have not been checked against primary sources. Treat every "(check)" accordingly.

Exercises

EXERCISE 1

Explain how the Turk worked in broad terms, and say why the story is still told.

→ Solution

EXERCISE 2

Describe two reasons why the 1997 Deep Blue match was more than just a game result, and one reason to be careful about drawing conclusions from it.

→ Solution

EXERCISE 3

Use the points function to check this result: a 12-game match with 3 wins, 1 loss and 8 draws. Give both scores and the winner.

→ Solution

Quick Reference

- **The Turk:** 1770, a human hidden inside
- **Deep Blue:** lost 2-4 in 1996, won 3.5-2.5 in 1997
- **AlphaZero:** reported 28-72-0 against a leading engine, 2017
- **Method:** check the sums, then ask about the conditions

The History of Chess

Course 13 · Chapter 10 · Capstone: Testing the Legend

The course has followed one game from northern India to the internet. This last chapter puts the pieces together: a timeline, the claims we set out to test in Chapter 1 weighed against what we found, six questions to check your understanding, and a short method for reading any history of the game. Dates are those given in earlier chapters and keep their "check" status.

Timeline

Date (check each)	Event	Chapter
By about the 6th century	Chaturanga in northern India (sources range from the 5th to the 7th)	2
7th century onward	Chatrang in Persia, then shatranj in the Islamic world	2
By about the 10th century	The game in Spain, Sicily and elsewhere in Europe	3
12th century	The Lewis chessmen carved	3
c. 1475 to 1495	The new queen and bishop recorded in Valencia; Vicent's book in 1495	4
1561	Ruy López's book printed	5
1749	Philidor's *Analyse*	5
1851	London tournament; Anderssen wins	6
1886	Steinitz becomes the first official world champion	7
1948	FIDE takes control of the title	7
1972	Fischer beats Spassky in Reykjavik	8
1997	Deep Blue beats Kasparov	9
2017	AlphaZero reported to beat a leading engine	9

Myths Tested

Claim from Chapter 1 (check each)	What we found
Chess is 4,000 years old.	Not supported. The earliest evidence that is clearly chess is of the 6th century or so, in India (Chapter 2).
A king rewarded the inventor with grains doubled on every square.	A legend about exponential growth. The arithmetic is exact, $2^{64} - 1$ grains, but no source shows it as history (Chapter 2).
The queen has always been the strongest piece.	False. She was a weak counsellor until the later fifteenth century (Chapter 4).
The Turk was a thinking machine.	False. A human operator was hidden inside (Chapter 9).
Chess players are all geniuses.	Not tested by this course. The question is about ability, memory and practice, and needs studies of players, not histories of the game; treat the claim with caution.

> **Other legends met on the way**
>
> Isabella of Castile as the cause of the strong queen (Chapter 4), the Ruy Lopez as Ruy López's own invention (Chapter 5), Anderssen as a "world champion" in 1851 (Chapter 6), and "Fischer beat the whole Soviet system" (Chapter 8) all fail the same test: a neat story is attached to a more complicated record.

A Method in Code

The method used throughout can be put as three questions to ask of any claim: how early is the source, is it story or record, and does anything independent agree? The script below turns that into a crude checklist. It is a thinking aid, not a measurement. It was run to produce the output shown.

Copy

```
def rate(early, record, independent): score = sum([early, record, independent]) return ["weak", "thin", "fair", "strong"][score] claims = { "Karnamak: Ardashir played chess": (False, False, False), "Lewis chessmen are 12th century": (True, True, True), "Wheat on the squares": (False, False, False), "Deep Blue won in 1997": (True, True, True), } for claim, flags in claims.items(): print(f" {claim:36} {rate(*flags)}")
```

The two strong claims are supported by objects or records and several independent sources; the two weak ones are legends with no early or independent support. The flags themselves are judgements, so two readers may set them differently, and the checklist only makes the reasoning visible (check).

Six Review Questions

1. What are the three names of the game on its journey from India to Europe, and which language does each come from?
2. Why do the Lewis chessmen tell us about the appearance of the game but not its rules?
3. List three changes to the rules in the later fifteenth century and say why the queen's change mattered most.
4. What did London 1851 establish, and what did it leave unsettled?
5. What changed in 1948, and what changed in 1993?
6. What does the Turk have in common with the story that Fischer beat the Soviet system?

Reading Chess History

- **Date the source, not just the event.** A legend written six centuries later is evidence for the legend, not the event.
- **Separate objects, rules and stories.** Objects show what pieces looked like; texts show rules; stories show what people wanted to believe.
- **Look for the person in the title.** Names on openings, pieces and championships often record who wrote, promoted or won, not who first did it.
- **Ask who controls the institution.** Titles, ratings and tournaments are made by people with interests.
- **Check the sums.** Many claims about scores, grains and rating changes can be tested with arithmetic.

> **A British comparison**
>
> Britain appears at nearly every stage of the later story: the Lewis chessmen in London and Edinburgh, the Staunton pattern and the 1851 tournament in London, Short's challenge in 1993 and Turing's early thinking about machine play. A good way to finish is to see the

Lewis chessmen in the National Museum of Scotland or the British Museum (check what is on display) and ask the questions of this chapter of what is in front of you.

Not Yet Verified

This chapter summarises the earlier ones, so it carries their limits: the broad outline, the Lewis find, the 1495 and 1561 books, London 1851, the 1972 and 1997 results and the AlphaZero report were checked by web search at the time of writing, while many dates and attributions were not and are flagged "(check)". The claim about the abilities of chess players was not examined at all. Treat every "(check)" accordingly.

Exercises

EXERCISE 1

Choose any three events from the timeline and write a short paragraph linking them as one story.

→ Solution

EXERCISE 2

Add two claims of your own to the checklist script, rate them, and say whether you agree with the output.

→ Solution

EXERCISE 3

Answer the six review questions in a sentence or two each.

→ Solution

Course complete

You have finished *The History of Chess*: the game's origins in India and Persia, its journey to Europe, the rule changes of the later fifteenth century, the masters and their theories, clubs and tournaments, the world championship, the Cold War contest, the machines, and a method for testing the legends. Related courses include *The History of Football* and *The History of Timekeeping*.