Chess♯

How to play… if you already know how to play chess

1) Chess♯ is played with a standard chess board, the 32 standard chess pieces, and a standard chess clock. No new materials are needed.

2) Chess♯ begins with only the pawns on the gameboard. The White pawns fill row 2 and the Black pawns fill row 7, just like the start of a classical chess game. The remaining pieces (the non-pawn pieces: 2 rooks, 2 knights, 2 bishops, the queen, and the king) are lined up off the board in front their player. This group of remaining pieces is called the <u>reserve</u>.
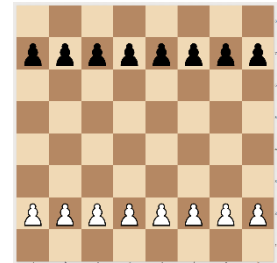
   - Pieces enter the reserve only at the setup of the game. There is no other way for a piece to enter the reserve.

3) A player must do one of the following on their turn:

A. *Place any non-queen piece from their reserve to an empty square in their first row (White: row 1; Black: row 8)*
   OR
B. ***IF** their queen is the only piece left in the reserve, she may be placed onto an empty square in the first row (White: row 1; Black: row 8)*
   OR
C. ***IF** their king is on the board, a piece already on the board may be moved*

   - There are no other restrictions on placing a piece from the reserve. A piece may come into play attacking the opponent's king. A piece may come into play to block an attack on their king. A king may come into play on a square that is being attacked. Both bishops may be placed on squares of the same color.

   - Pieces may be held in reserve for as long as the player would like. But when the player's king isn't on the board, the only thing they can do on their turn is place a piece. Thus, necessarily, the king will be placed in the first 7 moves.

   - To signify a piece placement, use the @ symbol between the piece and square.

   - For example…

Move 1	White places a Bishop onto a1	Black places their King onto a8	1. B@a1	K@a8
Move 2	White places a Rook onto b1	Black moves the Pawn on e7 to e6	2. R@b1	e6
Move 3	White places a Bishop onto c1	Black moves the Pawn on e6 to e5	3. B@c1	e5
Move 4	White places a Knight onto d1	Black places a Rook onto e8	4. N@d1	R@e8
Move 5	White places a Knight onto e1	Black moves the Rook on e8 to e7	5. N@e1	Re7
Move 6	White places a Rook onto f1	Black places the other Rook onto e8	6. R@f1	R@e8

4) The standard way to win is to capture your opponent's king.
   - A game of Chess♯ is not over at checkmate, but when the king is captured. For most checkmates, the king will be taken on the next move, but not always with beginners.

5) The concepts of check and checkmate do not hinder movement in any way. A king may move into check, and a piece that is pinned to a king may move away. (Of course, doing so gives your opponent the opportunity to immediately capture your king and win the game.)

6) No castling.

7) Pawns do not sprint—i.e., they can only move one space from their starting square.

8) Pawns that make it across the board promote to a queen. (Only.)

9) Other than rules 4–8, all pieces move on the board in the same way as a classical game of chess (pawns move forward into an empty square, pawns capture diagonally, knights jump over other pieces, rooks move in a straight line, etc.)

10) Chess♯ games never end in a draw. There are no draws by repetition nor draws by agreement. (However, the game may resolve as an impasse, as defined in rule 11.)

11) Chess♯ games only end in the following ways:
    - A player's king is captured
    - A player resigns
    - A player runs out of time, their opponent notices this, and claims a win on time
    - A player claims that they are in stalemate when their king is not currently being attacked (i.e., "in check") but every legal move they could make puts the king under attack (i.e., "put the king in check")
    - A player claims that the game is an impasse, when the last 50 moves (by each side) contained no pawn moves and no piece captures
    - A player may suggest to their opponent that the game is in a state such that an impasse is inevitable in the next 50 moves. If the opponent agrees, the game is ruled an impasse. (Our term for this situation is fast-fifty—as in "I propose a fast-fifty" and "I accept/reject the fast-fifty".)

12) Chess♯ tournament scoring works like this:

Game Outcome	White's Score	Black's Score
Black Wins (e.g., takes White king, wins on time, opponent resigns)	0	10
Black Stalemates White (i.e., White claims a stalemate)	2	8
Impasse: Black has more material on the board *	3	7
Impasse: Equal material on the board *	4	6
Impasse: White has more material on the board *	7	3
White Stalemates Black (i.e., Black claims a stalemate)	8	2
White Wins (e.g., takes Black king, wins on time, opponent resigns)	10	0

Pawn = 1pt, Knight = 3pts, Bishop = 3pts, Rook = 5pts, and Queen = 9pts (Material in a player's reserve does not count.)

Chess♯ FAQ

How to pronounce?

"Chess Sharp"

We prefer to use the ♯ character (the sharp sign from sheet music) instead of the # character (the number sign), but they both mean the same thing. Chess♯ = Chess# and they're both pronounced "chess sharp."

Why?

I love the game of chess and enjoy teaching schoolchildren how to play. Chess has been shown to be an excellent activity to help students with academic and life skills. However, when I consider the totality of chess from my beginning second graders to the world championships, I want to provide an alternative that addresses what many people have pointed out as being classical chess's downsides:

    a) Opening Memorization
    b) Draws
    c) Unnecessary Rules Complexity

Combining suggestions from some of chess's greatest players, Chess♯ is an attempt to address these obstacles. The goal is to simplify the rules while making the game more strategically rich. I want chess-like games to flourish and so I'm offering a variant that is both easier to learn and produces a more satisfying tournament experience for players, directors, and observers.

I'm not trying to replace chess. I enjoy going to USCF tournaments. I love playing chess online with the standard rules. There's nothing wrong *per se* with classical chess. But, in my mind, Chess♯ is simpler, more interesting, and more exciting. It's easier for a tournament director to run a Chess♯ tournament (especially with beginners), and the games are peppered with novelty and action. Because there are no draws, there's always something to play for.

What's the point of placing the first row pieces in the reserve at the beginning of the game?

It blows away opening preparation completely, which means that it breathes new life into the start of the game. Other variants have been created (and sold) to address this same issue, like Chess960, Capablanca Chess, Grand Chess, Gothic Chess, Omega Chess, and Seirawan Chess. But of that list, only Chess960 and Chess♯ can be played with the standard board and pieces. That's a big deal because almost every elementary school has a bucket of standard chess sets, but no elementary school is motivated to buy a non-standard set. (It's hard enough to convince the PTO that we need a couple chess clocks.)

The idea of deploying the major pieces in the first row as a part of the game isn't new. In the 1940s, David Bronstein formalized a method of playing like this where each player took turns placing all their pieces in the first eight moves. He showed it to World Champion Max Euwe, who not only liked the idea, but (as a math professor) gave an estimate that the number of starting positions exceeded four million.

That variant went by several different names: "Pre-Chess," "Shuffle-Chess," "Placement-Chess," "Bronstein-Chess" and "Meta-Chess." In the late 1970s, GM Pal Benko became its biggest proponent saying:

> "The continual refinement of technique and assimilation of knowledge, particularly in the openings [of classical chess], will gradually lead to the extinction of the game – it will be solved, played out… Most of the blame – if that is the word – must fall on the vast store of opening information that is available to every player (and every computer). The amount of study a master has to do to remain up to date in the openings would suffice for a college education. If he neglects his studies his score suffers. I think this corrupts the essential nature of chess, which is a fight between the creative ideas of two individuals. The vast array of predetermined opening variations and theories is, in my view, so much dead weight that should be discarded to save the true values of chess… The task, then, is to find a minimal change in the rules that would retain as much of the present game as possible and yet eliminate its worst feature, the over-analyzed starting position. … The placing of the pieces has a strategy all its own … It is clear that neither player, if he is alert, can get a serious disadvantage in this phase… Although White still has the first move, this gives Black the potentially important first clue as to how to place his own forces. It seems to me that for this reason the chances of the two sides are more nearly equal in Pre-Chess than in the standard game and that this will have the effect of producing not more draws but more exciting chess."

What's different between Chess♯ and [Benko's Pre-Chess](#)?

First, with Pre-Chess, all 8 major pieces had to be deployed before either player could move a piece on the board. (With Chess♯, either player can move pieces on the board after their king has been placed. This leads to even more strategic considerations, like placing the king early to rush pawns into the middle before your opponent's pieces are even mobile.)

Second, Pre-Chess required bishops to be placed on opposite colors. (Chess♯ does not require that. It's up to the player to decide if they are better off with two bishops on the same color or not… more strategic complexity.)

Third, Pre-Chess allows for castling, but only when there is an unmoved king on e1/8 and an unmoved rook on a1/8 or h1/8. (Chess♯ does not allow any castling. Pre-Chess's use of castling hardly ever comes up, since the king can just start the game on g1/8, and considering how unique and complicated the rules of castling are, it's not worth including when it happens so infrequently.)

Still, it looks like Chess♯ is awfully similar to Pre-Chess. Why not just go with that?

I probably wouldn't have bothered with the Chess♯ project if Pre-Chess already had an established community. But since the choice is between starting a Pre-Chess program or starting a Chess♯ program, I'm going forward with Chess♯ because I think it's slightly better.

What about Chess960?

There's nothing wrong with Chess960. It's a solid game. I've enjoyed it a lot, and it's received more attention than any other variant. Personally, I like Chess♯ better because Chess960 has starting positions where both players feel cramped and awkward for no particular reason. But I'm delighted whenever anyone asks to play a game of Chess960 with me.

However, when it comes to teaching children (and running scholastic tournaments), Chess♯ is appreciably easier. First, it's not easy for a pair of 2nd graders to get a proper Chess960 setup by themselves. (Yes, there's a way to do it with a single six-sided die, but it's not easy to get kids to remember that method… bishops on opposite-colored squares, king between the rooks, etc.) Second, castling, which is already a tough concept for kids, is a nightmare in Chess960.

Why allow both of a player's bishops to start on the same color?

Why not? It's one fewer rule to allow it, and I haven't seen that it breaks the game in any way when a player chooses two dark-squared bishops. It can become part of your placement strategy to make a double-bishop attack on one color. Of course, the strategy can backfire if you get drawn into an endgame with two bishops on the same color. I don't see any reason to prohibit players from taking that gambit if they want it. Chess♯ prefers unnecessary rule complexity, and this strikes me as an unnecessary rule.

Why get rid of castling?

Castling feels like an *ad hoc* rule. A kludge. The king was too vulnerable in the center, and it was hard to get the rooks connected, so a special move was invented that does both (with layers of conditions on how to do it properly lest it be abused by, say, a king who moved off e1 and then back to it…). Chess didn't always have castling, and the rules of castling weren't consistent internationally until the late 1800s.

When teaching chess to children, I'm always reminded how tricky castling is. They get it wrong all the time. Sometimes the king flies all the way to the corner. Sometimes kids castle without a rook. They try to castle out of check, across check, or into checkmate. It's quite a struggle to get them to understand the proper conditions and method to castle. (Korchnoi might have some sympathy… he asked an arbiter in the 1974 Candidates final whether or not it was legal to castle when the rook was under attack.)

For classical chess, castling is imperative. You cannot play a strong game without knowing about castling, so it must be taught. In fact, [when Vladimir Kramnik asked us to rethink chess](#) to find more creative play in the opening and more decisive games at the top level, his first suggestion was simply to remove the ability to castle. Castling is that important to classical chess.

With Chess♯, castling is significantly less important because the player can protect their king with their initial piece placements. (And if they don't… if they choose to put the king in a weak center… then that's a choice they have to live with… just like every other move in chess.) The kludge simply isn't needed.

Why get rid of sprinting?

Pawn sprinting also wasn't a universal chess rule until the late 1800s. Notably, Moheschunder Bannerjee, the father of the Indian Defenses, developed his unique chess openings because where he lived, in Bengal, pawns could only ever move forward one square.

Kramnik also assessed the "Pawn one square" variant in his Rethinking Chess project. AlphaZero calculated that it dropped White's advantage from 50.8% (Classical) to 50.3%. (The only variant that got the two sides closer to equal was "Pawn-back" (50.1%).)

The choice to remove sprinting from Chess♯ is two-fold:

1) In our first games, we observed that when sprinting was allowed, opening variety was pruned. It's so important to claim the central squares with pawns, that players are pressured to place their king earlier. More on this in the "*What is your ideal opening meta?*" question below.

2) From a rules standpoint, the game is noticeably simpler. Children misapply sprinting all the time. Most often they think that in one turn they can move forward one square and then diagonally to capture. Sometimes they think they can move diagonally two squares to make a capture. Sprinting also brings *en passant* into the rules conversation, the counter-intuitive move where you take a piece by moving to an empty square. *En passant* is so hard for kids to understand properly (and comes up so rarely), that I personally don't teach it until a child is playing full-fledged USCF tournaments.

Why does the queen have to be placed last?

See "*What is your ideal opening meta?*" below.

What is your ideal opening meta?

1) Players would never profit from doing move-by-move memorization before a tournament
2) Players are in control of their setup
3) Players have a choice of goals to aim for at the start the game, thus making a variety of moves viable

Let's start by assessing the other variants with these criteria.

Classical Chess fails on all three, which is why we're here. There really aren't that many viable openings. White technically has 20 possible opening moves, but at the master level, 4 choices make up 98% of all games (e4, d4, Nf3, c4). Each of these moves has roughly 4 viable responses as Black (except e4, which has 6 or 7 decent options). In other words, the game starts on a tactical knife-edge where you have to find one of the decent moves each turn from the beginning. If you screw up and play something that looks decent, but is known to be inferior (like, say, the Philidor Defense), you're in for a tough go. Thus, every good player has to memorize a repertoire of decent moves to play competently.

Kramnik's "Rethinking Chess" Variants succeed in overthrowing the classical opening books, but they don't address the fundamental issue. For example, in his favorite variation, **No-Castle Chess**, I have no doubt that a new opening book would eventually emerge, and the same 4 moves for White (e4, d4, Nf3, c4) will dominate master level play. All these variants do is force players to memorize new openings… not get rid of opening memorization.

Of the options he considers, **Pawn One Square** would have the most impact on the classical opening book. It forces out 3 of White's best 4 starting moves by fiat (e4, d4, and c4).

Chess960 succeeds in getting rid of opening memorization. Nobody is going to invest time memorizing move-by-move sequences 10 moves deep for a setup that only has a 0.1% chance of being played in the next round. This is a legitimate victory. However, Chess960 doesn't do so well on criteria (2) and (3). Chess960 games feel something like playing a game of FreeCell (the solitaire card game), where a random situation is placed in front of you and you're trying to solve that puzzle. You didn't choose to have your pieces in this awkward situation, but neither did your opponent, so the best puzzler wins. It often feels like the setup is playing you, rather than you playing the setup.

Another knock on Chess960 is that White's first-move advantage varies with each setup—[sometimes as high as 60%.](#)

Pre-Chess succeeds in getting rid of opening memorization AND it gives you total control of your setup, which is exactly what I'm looking for. Depending on how you treat bishops and castling, there are between 8 and 13 million possible unique setups going into move 9 when the pieces on the board start moving.

So how does Pre-Chess deliver on both (1) and (2) where the other variants don't? Because the first 8 placement moves don't create any direct threats, the other player isn't hemmed into responding to those threats. And since players usually place their king last, both sides don't exactly know where their target will be.

Chess♯ takes the success of Pre-Chess and adds even more strategy. Rather than always placing your king last (which is strategically dominant in Pre-Chess), it gives you the risk-reward option to commit your king early—so that you can start your attack before they do—at the risk of letting your opponent place their pieces to exploit your king's known location.

Chess♯ started as just that simple innovation to Pre-Chess: pieces can move once the king is placed. But in playtesting, two issues arose. First was that establishing a strong pawn center on the middle squares is so dominant, that in practice, the only response to something like K@h1, e4, d4, c4 was for Black to also commit their king immediately. Removing pawn sprinting solves this. It now takes White seven moves to achieve what could have been achieved in four. Black can choose to ignore that setup and place six major pieces aimed at overwhelming White's king.

The second issue was that on the initial board, an active queen is extremely dominant. The pawns don't have defenders. Thus, when White opens with something like: K@h1, Q@d1, e3… the queen has extremely strong options with Qf3, Qg4, or Qh5 each where she can fork two of Black's pawns. And after taking a pawn, the queen is then on the 7th rank threatening adjacent pawns and pieces. Black can deal with these threats, but it requires committing their king early. So, to hedge this we added the rule of requiring the queen to be the last unit placed from the reserve. This also adds a strong incentive to place all your pieces as quickly as possible. Players now have to balance the strategic value of [contesting the center with pawns] with [placing all my pieces to get my queen].

In practice, Chess♯ openings adhere to standard opening principles, like controlling the center and developing pieces. But you usually don't get cramped the way you would in, say, a Queen's Gambit Declined, or many Chess960 games. You're even less cramped than Pre-Chess, because you can delay placing a bishop or rook until there is an open diagonal/file.

Because the opening moves don't usually make direct threats, there is a strategic prelude to the game that isn't in classical chess. It feels something like the start of a game of Go, where you begin by marking territory in a void of possibilities that you'll have to fiercely defend later.

Why doesn't checkmate end the game?

It's a formal rule of classical chess that you cannot take your opponent's king. Yet the whole point of a game of chess is to attack your opponent's king in such a way that it cannot escape being taken. Perhaps this odd rule arose from a custom where chess-playing kings felt it was disrespectful to consider their own death in a game of leisure… but whatever the case, the rule doesn't have any strategic purpose and is a huge stumbling block for newer players.

For the sake of simplicity, we define a victory as capturing the opponent's king. Many beginners walk into and out of check and checkmate. For those of us who run tournaments with beginners, it's really annoying to try to sort out a game, where, say, both kings are in checkmate and, when asked, the players disagree on who was put in checkmate first. In Chess♯, that game simply continues until one player physically claims the win by making a move to capture their opponent's king.

A mate-in-one (i.e., a "king-take-in-two") does not automatically end a game of classical chess, because the player may not see it. We're applying the same logic to checkmate (i.e., a "king-take-in-one").

It also addresses an obvious fairness issue… "How come he gets a do-over for moving his king where I can take it, but I didn't get one when I moved my queen where he could take it?!"

This rule should have no effect on experienced players.

What's an impasse?

Some games can get into a situation where neither player can forcibly take the other player's king. For example, when the board just contains the two kings and nothing else, your opponent can always move away from you, and you can always move away from them. The only way this game would end is for one side to make the stupendously bad choice of moving into a square where the other king could take them.

Similarly, there are other situations where the best move by both sides creates a loop of repeating the same moves back and forth. For example, consider a situation where I have to continually attack my opponent's king with a queen to avoid checkmate, and his king only has one square to go to. On that square, I again have to attack him with my queen (to avoid checkmate) and the only square he can go to from there is the square he came from on the last move. After that move, the board is exactly the same as it was 2 moves ago, and the only non-losing strategy for each side is to keep making these same 2 moves over and over. Of course, either side could make a different move and break the loop, but that would lose their king.

If there are 50 moves at the end of a game (that is, 50 moves by white and 50 moves by black) where no piece is captured and no pawn moves, the game is automatically considered to be an impasse.

What's a "fast-fifty"?

To avoid the tedium of playing out 50 unnecessary moves, both players can agree to a "fast-fifty." This means that they both agree that the game is an impasse, that if they were to play another fifty moves, neither side would take a piece or move a pawn.

What about stalemates? Why aren't stalemates counted as draws? (Or wins?)

Stalemates have an interesting history. In different times and places, they used to be treated as victories, losses, "inferior victories", draws, illegal moves, or the stalemated side had to forfeit their move. The current rule became standardized in the early 1800s when Jacob Sarratt insisted upon its use in England after traveling to continental Europe and seeing the way it was played there.

In other capture games, like checkers, you are forced to move your final piece into jeopardy when that's your only move… you aren't considered an equal player by getting yourself into a situation where all your moves are suicide. Even in chess, you can get into other *zugzwang* situations where you have to move even when you don't want to.

Several Grandmasters (from T.H. Tylor in 1940 to Nigel Short in 2014) have suggested to score stalemate as a win, and Kramnik experimented with the idea in his "Rethinking Chess" project. Endgames are quite a bit different when stalemates are treated that way, mostly because a connected king + pawn can always beat a king. This led GM Larry Evans to comment that, treating stalemates as wins is a "crude proposal that ... [would] make chess boring."

GM Evans is correct. Endgames have more life when there is the challenge of scoring the checkmate instead of just a stalemate. Players should have an incentive to play for the "superior win".

Interestingly, the best resolution here is one of the oldest ones. In the 1920s Emanuel Lasker introduced the idea of a partial victory… proposing that a checkmate be scored at 10 points and a stalemate scored at 8 (with 2 points going to the loser). Lasker's proposal creates incentive to play for the checkmate over the stalemate, **and** incentive to play for the stalemate over the 50-move impasse, which is why I chose his values for Chess♯.

Partial victories… looks like you ran away with that idea. What's the purpose of all these nuances in the different impasses?

The purpose is threefold:

1) Give every chess game a victor

2) Give players something to play for as long as possible

3) Reduce the tournament's reliance on tiebreaking calculations that are perceived as counter-intuitive and random

Most competitive players (and almost all fans) want tournament games to end in a decisive result. To me a 0.5–0.5 draw feels like a waste of time. A game was just played, and we didn't establish who was the better player. And what really perplexes me is when a game like [King + Bishop] vs [King] is treated as though both players demonstrated the same level of talent. Yes, it's impossible to force a king-take with just a king and bishop. But why should the tournament perceive the player who dropped a piece to

be dead equal? Channeling Larry Evan's aforementioned comment about stalemate, I maintain that flattening all non-checkmates into 0.5–0.5 draws is "a crude proposal" that we've been living with since 1867 (at a time when only 14% of recorded chess games ended in a draw). Chess♯ is less boring because there are minor objectives to play for when the major objective is out of reach. Players make their own tiebreakers.

Why does Black get a 6–4 partial victory when the game ends in King vs King?

Because White has a slight advantage from going first. If White can't convert the first turn advantage into at least a pawn's worth of material, they suffer a slight loss.

Why aren't there draws by repetition? Oops, excuse me, I mean "impasses by repetition"?

A Chess♯ game can still get into a state where the best move by each player creates a loop. If the players agree that their game is in that state, it will terminate as a 50-move impasse or (more likely) as a fast-fifty. "Impasses by repetition" would be an unnecessary class of rules.

Aren't fast-fifties essentially draws-by-agreement?

Fast-fifties are similar to draws-by-agreement. The biggest difference is that the game won't be scored as ½–½. If a fast-fifty is agreed to on the first move, White concedes a point to Black (scored as 4–6).

The other big difference is that when players agree to a too-early fast-fifty, they would both have to violate their own sense of integrity. The term "draw" is pretty nebulous and so players can convince themselves in good conscience that any fairly equal game at any stage is a "draw". But "impasse", on the other hand, has a precise definition referring to making 50 moves without a pawn move or piece capture.

Why limit pawn promotions only to queens?

Under-promoting is very rarely advantageous. I analyzed 1.4 million computer championship chess games (227,134 pawn promotions) and determined that under-promoting was advantageous only about 4 times out of a thousand (almost all to knight). That's simply not often enough to warrant the additional complexity. Furthermore, one of the main reasons to under-promote is to avoid unintentionally stalemating your opponent, which in classical chess means losing half the total score for winning the game (and giving your opponent half). But in Chess♯ a stalemate is worth 80% of a total victory, so the required queen promotion hurts much less in that (rare) situation.

In what ways could Chess♯ potentially be improved?

The thing I'm watching the most closely is opening variety. We may learn from game results that placing one's king on the first move is unavoidable because [grabbing turf with immediate pawn movements] is inherently more powerful than [placing major pieces]. If that's the case, I'd consider a revision like "pieces can't move until a king and X other pieces have been placed" or even just abandoning movement altogether until all pieces have been placed like Pre-Chess (which is attractive in its simplicity).

Other than that, the tournament scoring values could be tweaked. Scoring king vs king as 6–4 may create too much of an advantage for Black. If so, we could go to a hundred-point scale and score it as 51–49 or something in that ballpark. Maybe stalemate should be worth 78–22 instead of Lasker's hunch of 80–20. Maybe a bishop should be worth 3.25 when compared to the knight's 3 (as Fischer suggested). All such values are difficult to refine without a Chess♯ computer engine.

How is Chess♯ easier for new players?

Here is a comparison of the concepts that a new player needs to learn in both games.

	Time to Teach	How likely kids will mess it up when playing on their own	Classical Chess	Chess♯
How the king moves, king necessary to win	**2 mins**	**Very Low**	Yes	Yes
How the rook moves	**2 mins**	**Very Low**	Yes	Yes
How the bishop moves	**2 mins**	**Very Low**	Yes	Yes
How the queen moves	**2 mins**	**Very Low**	Yes	Yes
How the knight moves	**20 mins**	**High**	Yes	Yes

- Difficult to understand the proper "L" shape and how to navigate to nearby squares (e.g., getting from b1 to c1)
- With Chess♯, I recommend new players (especially younger ones) play several games without knights, and add them in when comfortable

	Time to Teach	How likely kids will mess it up	Classical Chess	Chess♯
Pawns move forward, capture diagonal	**3 mins**	**Low**	Yes	Yes
Pawn promotion to queen	**1 min**	**Low**	Yes	Yes
Pawn under-promotions	**3 mins**	**Medium**	Yes	No

- A common mistake is thinking that they can't have 2 queens on the board at the same time, so kids wait to promote or under-promote

En Passant	**10 mins**	**High**	Yes	No

- Trying to en passant a pawn that only moved forward-one by "capturing" the square it left from
- Trying to en passant a pawn a turn or two too late
- Trying to en passant a non-pawn piece (e.g., a White pawn on d5 "taking" a rook that moved from e7 to e5)
- Trying to en passant a pawn that has sprinted by moving to the passing square with a non-pawn piece (e.g., a bishop)
- Trying to capture a pawn diagonally backwards and claiming it's en passant (SD State Scholastic 2022)

How to castle properly	**15 mins**	**High**	Yes	No

- Kids usually remember that the king goes to the other side of the rook, but don't consistently move the king to the proper square (e.g., the king could end up on f1, h1, a1, b1, or d1)
- Forgetting that they can't castle if they've already moved the king or a rook (even when the pieces moved back)
- Castling out of check or through check (or sometimes, into check)
- But it's ok to castle if the rook is being attacked, or the rook moves through an attacked square (b1 in O-O-O)

How to set up the board	**10 mins**	**Medium**	Yes	No

- Most common mistake is mixing up the king and queen (especially if a dark square is in the bottom-right corner)
- Knights and bishops are sometimes swapped

Explaining how pieces enter play in Chess♯	**5 mins**	**Medium**	No	Yes

- Pieces on the board can't move until king is placed (suggest that beginners should place their king first)
- Queen is always placed last

Checkmating instead of king-taking	**60 mins**	**Ridiculously High**	Yes	No

- Very unintuitive to new players. You can blunder any other piece away, but not a king?
- Many new players are incapable of winning a game like [king] vs [king+rook] by checkmate, but they would usually win by king-take if the tournament didn't always give players a takey-back for not-moving out of check
- When running an elementary tournament, these issues constitute about 90% of the players' questions

Three-move repetition	**15 mins**	**High**	Yes	No

- The "3 moves" is often counted incorrectly, e.g., White-Black-White instead of White-Black-White-Black-White-Black
- It's tough to assist a game without notation where one child claims a 3-move repetition but the other disputes the last two moves

Partial victory scores for stalemate and impasse	**0 mins**	**N/A**	No	Yes

- Does not need to be taught. The tournament can use this scoring in its software and just explain the values when they come up.

Where does the name Chess♯ come from?

It's an homage to the most difficult piece I learned to play on the piano.

Appendix

https://www.chess.com/news/view/fide-world-chess-championship-2021-game-10

As GM Fabiano Caruana put it, "White has a million ways to force a draw against 1.e4 e5."

…

So, why not something sharper as Black? "The problem is, basically, playing as Black you don't have such a big choice," argued Nepomniachtchi. "Especially when it's classical, even if you play a so-called sharp opening like the Sicilian, if White wants to shut it down White surely will shut it down."

…

Our Game of the Day annotator GM Sam Shankland summed up the game as follows: "Game 10 was only interesting in that it showed some of the players' priorities and choices—the gameplay itself was an absolute snoozefest. Magnus predictably went for 1.e4, which is certainly the best move to play in a situation where a draw is a very welcome result."

Thoughts on Drawing
https://chess-sharp.games/ThoughtsOnDrawing.pdf

Rethinking Chess (Kramnik & Alpha Zero)
https://www.chess.com/article/view/no-castling-chess-kramnik-alphazero
https://www.chess.com/news/view/new-alphazero-paper-explores-chess-variants
https://arxiv.org/pdf/2009.04374.pdf
https://chess-sharp.games/RethinkingChess.pdf (mirror)

Stalemate and 'DTS' Depth to Stalemate Endgame Tables
https://centaur.reading.ac.uk/86343/1/Stalemate%20and%20DTS.pdf
https://chess-sharp.games/StalemateAndDTS.pdf (mirror)

Pre-Chess
http://www.quantumgambitz.com/blog/chess/cga/bronstein-chess-pre-chess-shuffle-chess
https://www.chess.com/blog/Boorchess/david-bronstein-had-it-right

Bobby Fischer talking about chess openings, Chess 960, Capablanca Chess
https://youtu.be/P349BdHUxlc

The problem with Chess 960
https://en.chessbase.com/post/the-problem-with-chess960

Brian Regan on the concept of checkmate (comedy)
https://www.youtube.com/watch?v=lS-R6a_XxoM