Errata for the HoTT Book, first edition

May 24, 2023

For the benefit of all readers, the available PDF and printed copies of the book are being updated on a rolling basis with minor corrections and clarifications as we receive them. Every copy has a version marker that can be found on the title page and is of the form ”first-edition-XX-gYYYYYYY”, where XX is a natural number and YYYYYYY is the git commit hash that uniquely identifies the exact version. Higher values of XX indicate more recent copies.

Below is a list of corrections and clarifications that have been made so far (except for trivial formatting and spacing changes), along with the version marker in which they were first made. This list is current as of May 24, 2023 and version marker “first-edition-1404-g79e6d60”.

While the page numbering may differ between copies with different version markers (and indeed, already differs between the letter/A4 and printed/ebook copies with the same version marker), we promise that the numbering of chapters, sections, theorems, and equations will remain constant, and no new mathematical content will be added, unless and until there is a second edition.

Location	Fixed in	Change
§1.1	182-gb29ea2f	Change notation $a \equiv_A b$ to $a \equiv$ Appendix A. (Neither are used a
§1.1	154-g42698c2	Clarify that algorithmic decidab only meta-theoretic.
§1.1	154-gac9b226	Mention notation $a = b = c = d$ $c = d$, hence $a = d$”, possibly inc
§1.3	42-g4bc5cc2	Cumulativity means some eleme the index i on $\mathcal{U}_i$ is not an interna ambiguity must be justified by r
§§1.3 and 1.4	42-ga34b313	Explain that we can’t define Fir mention them.
§1.4	165-g0ad2aba	Add swap as another example o discuss the use of subscripts and dent functions.
Remark 1.5.1	80-g8f95fa5	In the discussion of formation r type example should be $\prod_{(x:A)} E$
§1.5	51-g67e86db	Better explanation of recursion c tified, and how it relates to the u

Location	Fixed in	Change
§1.6	2-gbe277a8	In the types of g and $\mathsf{ind}_{\sum_{(x:A)} B(x)}$, which x should be a.
§1.6	27-gd0bfa0d	At two places in the definition of $R(x, \mathsf{pr}_1(g(x)))$.
§1.6	125-g7fdadbf	When substituting $\lambda x.\, \mathsf{pr}_1(g(x))$ f is well-typed, the left side of the be $\prod_{(x:A)} R(x, \mathsf{pr}_1(g(x)))$, not $\prod_{(x:}$
§1.7	30-g264d934	In two displayed equations, $f(\mathsf{inl}($
Theorem 1.8.1	391-g1ce619a	This should not be called a "Theo introduced what that means. Ins struct an element of…".
§1.8	125-g433f87e	In the definition of binary produ tions of $\mathsf{pr}_1(p)$ and $\mathsf{pr}_2(p)$ should der of arguments to $\mathsf{rec}_{\mathbf{2}}$ and $\mathsf{ind}_{\mathbf{2}}$.
§1.11	111-g1e868fa	When translating English to type t are unnamed in English but must
§1.12	154-g4ef49f7	Emphasize that path induction, lik ples, defines a *specified* function.
§1.12	1373-g142de42	In the second proof that based pat duction, the observation should b an instance of $\mathsf{ind}_{=_A}$, not $\mathsf{ind}'_{=_A}$.
§1.12	244-gd58529d	In proof that path induction im $D(x, y, p)$ should be written $\prod_{(C}$ type of C matches the premise of
Remark 1.12.1	563-g3286941	The facts that any $(x, y, p) : \sum$ (x, x, refl_x), and that any $(y, p) :$ (a, refl_a), can be proven by path in duction respectively.
Exercise 1.4	78-gcce4dc0	The second defining equation of side $c_s(\mathsf{iter}(C, c_0, c_s, n))$.
Exercise 1.4	293-g4663bfe	The defining equations of the recu tor only hold propositionally, and ciple to prove.
Exercise 1.6	229-ged891f3	This exercise requires function ext
Exercise 1.8	450-g7f38c9a	This exercise requires symmetry Lemmas 2.1.1 and 2.1.2.
Exercise 1.10	110-gfe4641b	To match the usual Ackermann–Pe played equation should be $\mathsf{ack}(\mathsf{su}$
Chapter 2	239-gaf3d682	In the chapter introduction, clar topies between paths must be end

Location	**Fixed in**	**Change**
Lemma 2.1.1	166-g37b78ef	Add remarks before and after th statement and proof should be i ement of some type.
Lemma 2.1.2	374-g0bc0908	In the penultimate display in th be simply d.
Lemma 2.1.4	750-g91b7348	In the first proofs of (i)–(iii $\mathsf{ind}_{=_A}(D, d, x, y, p)$.
§2.1	435-gee0b28a	In the third paragraph after Lem be $p \cdot \mathsf{refl}_y \equiv p$.
§2.1	165-g18642ca	Mention that the notation $a =$ variant, indicate concatenation o
§2.1	253-gdd47c75	Lemma 2.1.4(iv) justifies writing
Theorem 2.1.6	253-gdd47c75	The induction defining $\alpha \cdot_{\mathsf{r}} r$ has $\mathsf{ru}_p{}^{-1} \cdot \alpha \cdot \mathsf{ru}_q$, with ru_p the right be well-typed, we assume $p \equiv$ $\mathsf{ru}_{\mathsf{refl}_a} = \mathsf{refl}_{\mathsf{refl}_a}$ and its dual. Pr induction not only on α and β b 1-paths. After the proof, remar construct such operations from r
Definition 2.1.8	233-gc3fb777	The three displays should be $:\equiv$
§2.2	336-g8ff8a7f	In the type of ap_f towards th Lemma 2.2.1, $g(x)$ should be $f(y$
§2.3	154-g4ef49f7	Emphasize that unlike fibrations type families come with a *specifi*
§2.3	343-g6efd724	The functions Eq. (2.3.6) and Eq catenating with $\mathsf{transportconst}^B_p($ tively.
Corollary 2.4.4	253-gdd47c75	Canceling $H(x)$ may be done by
§2.4	1171-gab3c0aa	In the proof that $\mathsf{isequiv}(f) \to$ should be $\gamma(x) :\equiv \beta(g(x))^{-1} \cdot h($
§2.6	74-g9896e32	In the type of $\mathsf{pair}^=$ (just after th second factor in the domain sho
§2.6	895-g96db894	In the displayed equation just b $q, r, p' \cdot q', r)$ should be $\mathsf{pair}^{\cdot}(p$ $r, p', q' \cdot r)$ should be $\mathsf{pair}^{\cdot}(p, q \cdot$ are missing).
Theorem 2.6.4	349-gc7fd9d8	The path is in $A(w) \times B(w)$, not
Theorem 2.6.4	76-ga42354c	The third displayed judgmental be $\mathsf{transport}^B(p, \mathsf{pr}_2 x) \equiv \mathsf{pr}_2 x$.
Theorem 2.7.2	507-g8f10eda	In the proof, the equation $f(g$ $f(g(\mathsf{refl}_{w_1}, \mathsf{refl}_{w_2})) = (\mathsf{refl}_{w_1}, \mathsf{refl}_{w_2}$

Location	Fixed in	Change
§2.9	269-g3880fe2	The paragraph preceding the defi (before Eq. (2.9.5)) misstated the (
Axiom 2.10.3	992-gc4a5314	The axiom should read "For any A is an equivalence. The display $(A$ be deduced afterwards, outside th
Theorem 2.11.1	310-gd5fa240	The second half of the proof is mo follows abstractly using the 2-out or more concretely by concatenatin side and then repeatedly using na
§2.11	236-g32be999	The second display after the proo be $\prod_{(x:A)}(\mathsf{happly}(p)(x) =_{f(x)=g(x)}$
Theorem 2.11.3	628-g1bd8602	The sentence preceding the theor from Lemmas 2.3.10 and 2.11.2, bu rate path induction.
Theorem 2.11.3	704-g70c069e	The sentence after the theorem sh refl_c, not refl_c.
Theorem 2.11.4	364-g3c47534	The right-hand side of the dis $(\mathsf{apd}_f(p))^{-1} \centerdot \mathsf{ap}_{(\mathsf{transport}^B p)}(q) \centerdot \mathsf{apc}$
§2.12	101-g645f763	In Theorem 2.12.5 and the preced alence $(\mathsf{inl}(a) = x) \simeq \mathsf{code}(x)$, the
§2.12	370-g114db82	In the two displays after the proof should be $\mathsf{encode}(\mathsf{inl}(a), -)$ and en
§2.14.2	261-g4ccda0a	In the first displayed pair of equa be $\mathsf{transport}^{\mathsf{SemigroupStr}}(p_1, (m, a))$
§2.14.2	402-g2297ecb	The right hand side of the last di $m'(e(x_1), e(x_2))$.
§2.15	305-g64685f1	In the discussion of universal prop Σ-types surrounding Eq. (2.15.9) and "right-to-left" should be swit
Chapter 2 Notes	379-ga57eab2	It should be mentioned that Ho proposed an axiom similar to univ equivalent to univalence) for a un
Eq. (3.2.1)	1193-g54b20e3	The domain of $g : \prod_{(x:A)} A(x)$ sho
§3.5	86-g39feab1	The definition of subset $\prod_{(x:A)}(P(x) \to Q(x))$, not $\forall(x$ the latter notation has not been in
Lemma 3.11.7	95-gce0131f	In the proof, p should be r to ma of retraction.
Exercise 3.14	1162-ga97cb70	Should be to show that $\neg\neg A$ sati of $\|A\|$ but with only a propositio
Lemma 4.1.1	87-g693e9b9	At the end of the proof, Lemma 3 reason why $\sum_{(g:A\to A)}(g = \mathsf{id}_A)$ is

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Theorem 4.2.3	275-g8ea9f71	In the proof, the path concaten and τ were written in reverse or
Theorem 4.2.3	1043-gcfce4d7	In the proof, the type of τ $\epsilon(f(g(f(a))))^{-1} \cdot (f(\eta(g(f(a))$ $\epsilon(f(g(f(a))))^{-1} \cdot (f(\eta(g(f(a)))$
Lemma 4.2.12	296-ge3dc076	In the proof, $(fgx, \epsilon(fx)) =$ $(gfx, \epsilon(fx)) =_{\mathsf{fib}_f(fx)} (x, \mathsf{refl}_{fx})$.
Corollary 4.3.3	272-gfd47093	At the end of the proof, the equ that $\mathsf{ishae}(f)$, not $\mathsf{isContr}(f)$, is a
Theorem 4.4.3	299-g85b729b	In the proof, $\mathsf{lcoh}_f(g, \epsilon)$ should b played equation should have pr of $P(fx)$.
Lemma 4.7.3	265-g64000fb	The path concatenations in the subsequent equations) are rever two displayed equations should
Theorem 4.7.6	275-g84ab032	The first equivalence in the proo ercise 2.10.
Theorem 4.7.6	202-g775a3f0	The last equivalence in the proof mas 3.11.8 and 3.11.9 and Exerci
Theorem 4.8.3	205-gf9fe386	In the proof, $e \cdot \mathsf{pr}_1$ should be (computation better.
§4.9	114-gaba76c8	The point of Lemma 4.9.2 is th without assuming function exte
Corollary 4.9.3	484-g2ce1249	In the statement, "precomp composition".
Theorem 4.9.4	746-g4d540d6	In the definition of ψ in the pro $\mathsf{happly}(p, x)$ instead of along p.
Exercise 4.2	358-g9543064	The text should be "Show that f type is equivalent to $A \simeq B$. Ca nition of a type satisfying the th
§5.2	706-ged2c765	In the proof that $\mathbb{N} \simeq \mathbb{N}'$, the de $\mathsf{rec}_{\mathbb{N}}(\mathbb{N}', 0', \lambda n.\, \mathsf{succ}')$ and $\mathsf{rec}_{\mathbb{N}}$
§5.3	125-g433f87e	In the definition of $\mathbf{N^w}$, use $0_\mathbf{2}$ f the ordering of $0_\mathbf{2}$ and $1_\mathbf{2}$ in §1.8
§5.3	551-g82b74bf	The definitions of $\mathbf{N^w}$ and Li $\mathsf{W}_{(b:\mathbf{2})} \mathsf{rec}_\mathbf{2}(\mathcal{U}, \mathbf{0}, \mathbf{1}, b)$ and $\mathsf{W}_{(x:\mathbf{1}+A}$
§5.3	218-g42219cb	In the description of the constru is more clearly written as $f : B(a$
§5.3	525-gb1957b8	In the computation rule, the re an argument. It should read $e(a, f, (\lambda b.\, \mathsf{rec}_{\mathsf{W}_{(x:A)} B(x)}(E, e, f(b))$

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§5.3	570-g6ec04c3	In the verification that double com be e_0 and e_f should be e_1.
§5.4	554-g9b2a34b	The definition of the type of W fore Theorem 5.4.7) should read W $\sum_{(f:C\to D)} \prod_{(a:A)} \prod_{(h:B(a)\to C)} f(s_C(a$
§5.5	917-gd6960ad	In the first paragraph, the de $\mathsf{W}_{(b:\mathbf{2})}\mathsf{rec}_{\mathbf{2}}(\mathcal{U}, \mathbf{0}, \mathbf{1}, b)$.
§5.5	608-g6af101f	In the computation rule for homo side should be $\mathsf{rec}_{\mathsf{W}^h_{(x:A)} B(x)}(E, e, \mathsf{su}$
§5.5	1261-g4cdab82	In the commutative diagram p $\mathsf{W}_s(A,B)$, all occurrences of x sho
§5.5	1261-g4cdab82	In the definition of $\mathsf{W}_s(A,B)$ $\alpha(\mathsf{sup}(a,f))$, and $\prod_{(a,f)}$ should be
Eq. (5.6.6)	912-g04d3fb6	In the preceeding sentence, $\delta : d$ s
§5.7	908-g4b2eb10	The second two constructors of $\mathsf{paritynat}(1_{\mathbf{2}}) \to \mathsf{paritynat}(0_{\mathbf{2}})$ ar $\mathsf{paritynat}(1_{\mathbf{2}})$.
Theorem 5.8.2	139-gd5c5d01	In the proof of (iv)⇒(i), the $(\sum_{(b:A)} R(b)) \to \mathcal{U}$.
Exercise 5.2	622-ga0bd007	The two functions should satisfy mentally.
Exercise 5.3	622-ga0bd007	The function should satisfy both r
§5.8	171-gdc4966e	The subscript of $\mathsf{refl}_A : a =_A a$ sho
§6.2	54-gd4a47c2	Soon after Remark 6.2.1, the phras the fiber over the constructor base
Lemma 6.2.8	423-gf763ae1	Theorems 2.11.3 and 2.11.5 are n required by the induction principl
Lemma 6.3.2	417-g4aa6a15	Added Exercise 6.10: the function is actually an inverse to happly, so sionality axiom follows from an in
Lemma 6.4.2	625-g950efa9	In the second paragraph of the p extensionality should be omitted.
§6.4	327-g7cbe31c	In the first sentence after the proo P" should be "$P : \mathbb{S}^2 \to \mathcal{U}$".
§6.4	1039-g30da4c6	In the sentence after the proof of I in which s is a dependent path sho P.
§6.6	289-gdefeb8c	In the induction principle for the should be $b' =^P_p b'$ and $b =^P_q b$ resp
§6.7	289-gdefeb8c	In the induction principle for the should be $b' =^P_p b'$ and $b =^P_q b$ resp

Location	Fixed in	Change
§6.9	468-g5472874	The induction principle for $\Vert A$ $g(a)$, not $f(\vert a \vert) \equiv a$. And in tion principle for $\Vert A\Vert_0$ and in t $p =^B_{u(x,y,p,q)} q$ should instead be
§6.9	860-gc7d862c	In the penultimate paragraph, th tor for $\Vert A\Vert_0$ should begin "For e every $f : S \to A$".
Lemma 6.10.3	961-gde36592	The first sentence of the second end with $g(x) = \overline{g \circ q}(x)$.
Lemma 6.10.8	514-g18ade45	Instead of "is the set-quotient of say "satisfies the universal prop by $\sim$, and hence is equivalent ond displayed equation should fourth displayed equation shoul $(g \circ \mathsf{pr}_1 \circ q, \_)$, the fifth should $g(x)$, and the proof should concl assumption s".
Lemma 6.10.12	535-g0a9abfe	The "computation rules" satisfie equalities. Also, the proof requi mentioned equivalences.
Corollary 6.10.13	535-g0a9abfe	The defining clauses should use ratum for Lemma 6.10.12). Als refl_a rather than $\mathsf{refl}_{\mathsf{base}}$.
Lemma 6.12.1	682-g3af5dbe	Three occurrences of P in the sta
Lemma 6.12.3	457-g411ec6d	The right-hand side of the disp should be $(\mathsf{c}(g(b)), D(b)(y))$.
Lemma 6.12.3	961-gde36592	After the display we should hav
§6.12	519-gc99a54c	f denotes a map $B \to A$ in this used for functions defined by i may use k instead. Thus f shou Lemma 6.12.4; the first sentence third sentences of the paragrap tence of Lemma 6.12.5; the first, its proof; throughout the stateme the statement of Lemma 6.12.8; proof.
Lemma 6.12.4	537-gdf3b51d	In the display after the definition line should be with respect to x second line the subscript of ap sl

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Lemma 6.12.4	961-gde36592	The subscript of ap should also be fourth, and fifth displays. In the f path-concatenations should be in fifth display, $\mathsf{refl}_{g(b)}$ should be refl
Lemma 6.12.8	961-gde36592	Both occurrence of the function f the final two steps of the calculati
Lemma 6.12.7	501-ge895f81	Both occurrences of P in the state occurrences of Q in the proof shou
Theorem 7.1.4	180-gb672a4d	In the last displayed equation of t
Theorem 7.1.10	101-g713f48c	The base case in the proof is just L
§7.3	480-gdc84050	The third paragraph is wrong: in *would* actually work to define $\|A\|$
Theorem 7.2.2	1131-gc1748fa	In the second paragraph of the firs function $f(x,x)$ should be $x =_X x$
Lemma 7.2.4	644-g627c0a8	In the proof of the lemma, "If x $\mathsf{inr}(t)$".
Theorem 7.3.12	412-gb9582fc	In the proof, encode and decode sh
Lemma 7.5.12	801-g01922a8	The converse direction is false u inhabited. Also, the occurrences proof should be just p and $\mathsf{pr}_2 w$, r
Lemma 7.5.14	367-g1c8c07e	In the proof that the first compos rences of y should be $f(x)$.
Theorem 7.7.4	658-g016f3a4	In the second paragraph of the pro of pr_2 (but not the third) should be
Exercise 7.2	101-ga366be2	"entires" should be "entirely".
Exercise 7.2	683-g8941e50	This exercise needs more precise c "colimit".
Exercise 7.8	1074-gcd42187	$\mathsf{AC}_{\infty,\infty}$ is not Theorem 2.15.7, but t
Exercise 7.8	603-ge113e08	The penultimate sentence should univalence for any $m \geq 0$ and any
Lemma 8.1.8	535-g0a9abfe	The proof by induction on $n : \mathbb{Z}$ is not Corollary 6.10.13.
Lemma 8.1.12	535-g0a9abfe	The clauses defining q_z should us erratum for Lemma 6.10.12).
Theorem 8.2.1	1062-gf3bfeae	In the proof, E is not $(n+1)$-conn
Lemma 8.4.4	1181-g3e51973	In the proof, $(x : A)$ should be $(x$
Corollary 8.4.8	1023-gf188aeb	The proof requires a separate argu
Theorem 8.5.1	256-g9e6fcb8	The phrase "whose fibers are $\mathbb{S}^1$" the basepoint is $\mathbb{S}^1$". The same ch ercises 8.8 and 8.9.
Lemma 8.5.3	1062-gf3bfeae	In the definition of $E^{\mathrm{tot}'}$ in the pro

Location	Fixed in	Change
Lemma 8.6.1	396-g868335b	In the proof, the function k shoul should also be named ℓ, to avoic
Definition 8.6.5	87-g3f977b2	In the second displayed equa should be $\mathsf{merid}(x_1)^{-1}$.
Lemma 8.6.2	1203-g7464bf1	The type family P defined in the Q, to avoid clashes with the ty statement.
Lemma 8.6.2	399-g8897c94	In the last sentence of the proof be “$(n-1)$-truncated”.
Lemma 8.6.10	88-g0c0be67	The type of m should be $a_1 =$ begin with $C(a_1, \mathsf{transport}^B(m^{-1},$ “we may assume a_2 is a_1 and m
§8.6	165-gd5584c6	In (8.6.11), r'' should be r', th $\mathsf{transport}^B(\mathsf{merid}(x_0)^{-1}, q)$, and o tifying this with $q \cdot \mathsf{merid}(x_0)^{-1}$. point of r should be $\mathsf{transport}^B($
§8.6	474-g5289470	$\pi_3(\mathbb{S}^2) = \mathbb{Z}$ should be stated a from Corollary 8.5.2 and Theore
Theorem 8.8.3	1092-ge3b8b71	After applying the induction hy to be checked that for every pat $\pi_k(x = x, p) \to \pi_k(f(x) = f(x),$
§8.9	1154-g301662b	In the strengthening of conditio right side should read just “c” in
Example 9.1.15	1307-gfe63517	Stating that every isomorphism curate (consider the discrete ca a more accurate statement is th identity arrow. Notice that for must be combined with skeletali
Definition 9.2.1	807-gebec78b	In Item (iv), it should rea “$\hom_B(b,c)$”.
§9.4	1218-gcb6ba30	Just before Definition 9.4.6, it sho a category” instead of “Howeve
Theorem 9.5.4	971-g6096085	The sequence of equations at the with $\alpha_{a'}(f) = \alpha_{a'}(\mathbf{y}a_{a,a'}(f)(1_a))$, should remain a, a' rather than a
Definition 9.8.1	897-g94fb722	In (iv), “if $f : \hom_X(x,y)$” shou $g : \hom_X(y,z)$”.
§9.8	1111-g3332a31	The type of objects A_0 of th structures should be defined as
Chapter 9	966-g04374f5	The first sentence after Theorem if a precategory A admits a wea *into a category…*”.

Location	Fixed in	Change
Theorem 9.9.5	313-g8ee79db	In the second proof, the third cons follows from the fourth constructo fifth constructor, $j(g) \cdot j(f)$ shoul throughout the proof. Finally, for constructor should be included e to be implied by "higher inductiv
Chapter 9 Notes	379-ga57eab2	It should be mentioned that Hofm considered this definition of categ
Lemma 10.2.4	1303-ga530d97	The equation $\|B\|_0 \times \|A\|_0 \equiv \|B \times$ $\|B\|_0 \cdot \|A\|_0 \equiv \|B \times A\|_0$.
Lemma 10.3.8	1290-g4101ad3	In the proof, the second sentenc should have "$s(a') : \mathsf{acc}(a')$" rathe
Theorem 10.3.20	140-g55de417	The second sentence of the proof s induction on A, suppose $A_{/b}$ is ac
Lemma 10.3.22	140-gd7f8960	The statement should say $X : \mathcal{U}$ ra
Theorem 10.4.3	140-gcca0bcf	The penultimate sentence of the pr $b < c$" rather than "if $a < b$ and a
Theorem 10.4.4	871-g85bcd11	The statement of (i) should end w
§10.5	753-gc87ce23	The second clause in the inductio "Verify that if $f : A \to V$ and g : $h(\mathsf{set}(A, f)) =^{P}_{q} h(\mathsf{set}(B, g))$, whe the second constructor of V and (1 that $h(f(a)) =^{P}_{p} h(g(b))$ wheneve
§10.5	706-ged2c765	The proof that membership is w "hence $x = g(b)$ and $x \in \mathsf{set}(B, g)$
§10.5	1056-g4060c2b	In the definition of V-set, the nota
Theorem 10.5.8	708-g6f53189	In the pairing axiom, the pair clas not $u \cup v$.
Theorem 10.5.8	723-g9cf5b44	The replacement axiom should be the displayed class should be $\{ y$ Its proof should begin "let C deno
Theorem 10.5.8	706-ged2c765	In the proof of the function set ax $[u] \rightarrowtail V$ and $[u] \rightarrowtail V$" should $[u] \rightarrowtail V$ and $[v] \rightarrowtail V$."
Exercise 10.12	1053-ge13dd65	Extra parentheses around $\forall(x \in v$ make the formula unambiguous.
Exercise 10.13	1053-ge13dd65	Extra parentheses around $\forall(y \in x$ to make the formula unambiguou
Exercise 10.13	1056-g4060c2b	The notation $\in V$ should be $: V$.
Lemma 11.2.2	165-gb002a64	The statement should say "For al $(q < x)$ and $U_x(q) \Leftrightarrow (x < q)$".

Location	Fixed in	Change
Theorem 11.2.4	165-g179b359	In the proof, the sentence begin should be replaced by "From 0 < a, b, and c are either all positive $0 < a < x$ or $x < b < 0$, so that x
Theorem 11.2.4	merge of 38792ed8fb9b08275d14ed1c92830d42a806e2b5	In the proof of the theorem, th changed as follows: $L_{x^{-1}}(q) :\equiv$ $(qr < 1)$ and $U_{x^{-1}}(q) :\equiv (q > 0$ for positive x, and $L_{x^{-1}}(q) :\equiv (q$ $1)$ and $U_{x^{-1}}(q) :\equiv (q < 0) \Rightarrow$ negative x.
§11.2.2	832-g0cb658e	In the second paragraph, at "Fr quantification should be over δ a
§11.3.2	1209-g3e5ad94	In the statement of $(\mathbb{R}_\mathsf{c}, \sim)$-recu "$f(\mathsf{lim}(x)) : A$".
Theorem 11.3.16	1069-g3b333d5	In the description of openness "$\exists(\delta : \mathbb{Q}_+).$".
Lemma 11.4.1	87-g82b27c3	(11.4.2) should be $c : \prod_{(q,r:\mathbb{Q})}(q <$ therefore the use of c in the proo $c(x, s, t)$.
Theorem 11.5.6	1270-g3f17b85	In the proof, $n : \mathbb{N}$ should be $k :$ be $0 \leq i \leq k$. Also in the last equ $\lim x = \ell$.
§11.6	1189-ga9c35f0	The inductive case of $\iota_{\mathbb{Q}_D}$ shoul $\{\, \iota_{\mathbb{Q}_D}(a/2^n - 1/2^n) \mid \iota_{\mathbb{Q}_D}(a/2^n +$
Example 11.6.18	636-g827e7ea	In the first bullet point, to prove induction on z, since only wher say that $x^L + z$ is a left option of
Exercise 11.13	222-g3453cf1	This is the intermediate value theorem.
Example 11.6.18	980-ge9d0398	For the codomain of the outer re be $(x < y) \to (g(x) < g(y))$ ar In the first bullet of the verifica served, the outer inductive hypo ities $x^L + y \leq x^L + z$ and $x^R + y$ No-induction on z is required (fined by a cut).
Example 11.6.18	980-ge9d0398	The verification that Conway's number (i.e. all its left options a omitted. This requires turning t ner induction with codomain a v orem 11.6.7.

Location	Fixed in	Change
Appendix A	165-g76db618	After the introduction of the judg inaries, the sentence beginning "' should say instead "In particular,
Appendix A.2.1	64-g7c2312e	Clarify the distinction between ty well-formedness judgments, and tion for the latter.
Appendix A.2.5	26-gcd691e8	In Σ-COMP and the following pa and "we bind . . . y in C" should li
Appendix A.2.8	338-g4e1c688	The c argument in the eliminator COMP rules) should not bind a va
Appendix A.2.10	578-ga4b94a5	The unbased eliminator for the ide $\mathsf{ind}_{=_A}$, not $\mathsf{ind}'_{=_A}$.