Table 1: Proof terms for logical connectives

<table>
<tr><th>connective</th><th>introduction (how to prove)</th><th>elimination (how to use)</th></tr>
<tr><td>$\to$</td><td>fun H => _</td><td>M N</td></tr>
<tr><td>$\wedge$</td><td>conj</td><td>match H with conj H1 H2 => _ end</td></tr>
<tr><td>$\vee$</td><td>or_introl, or_intror</td><td>match H with or_introl H' => _ | or_intror H' => _ end</td></tr>
<tr><td>$\bot$</td><td></td><td>match H with end</td></tr>
<tr><td>$\forall$</td><td>fun x => _</td><td>M x</td></tr>
<tr><td>$\exists$</td><td>ex_intro _ x Hx</td><td>match H with ex_intro _ x Hx => _ end</td></tr>
<tr><td>$\neg$</td><td colspan="2">$\neg\varphi \equiv \varphi \to \bot$</td></tr>
<tr><td>$\leftrightarrow$</td><td colspan="2">$\varphi \leftrightarrow \psi \equiv (\varphi \to \psi) \wedge (\psi \to \varphi)$</td></tr>
</table>

Table 2: Basic tactics for logical connectives

<table>
<tr><th>connective</th><th>introduction (how to prove)</th><th>elimination (how to use)</th></tr>
<tr><td>$\to$</td><td>intro, intros</td><td>apply, eapply</td></tr>
<tr><td>$\wedge$</td><td>split</td><td>destruct H as [H1 H2]</td></tr>
<tr><td>$\vee$</td><td>left, right</td><td>destruct H as [H1|H2]</td></tr>
<tr><td>$\bot$</td><td></td><td>destruct H, exfalso</td></tr>
<tr><td>$\forall$</td><td>intro, intros</td><td>apply, eapply</td></tr>
<tr><td>$\exists$</td><td>exists, eexists</td><td>destruct H as [x Hx]</td></tr>
<tr><td>$\neg$</td><td>intro, intros</td><td>apply, eapply</td></tr>
<tr><td>$\leftrightarrow$</td><td>split</td><td>apply, apply <-, apply ->, eapply</td></tr>
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