

## Common Quantificational Forms

ENGLISH	FOL
<p>All <math>F</math>'s are <math>G</math>'s.            Every <math>F</math> is a <math>G</math>.            Each <math>F</math> is a <math>G</math>.            Anything that is an <math>F</math> is a <math>G</math>.            If anything is an <math>F</math>, it's a <math>G</math>.            Whatever is an <math>F</math> is (also) a <math>G</math>.            Nothing is an <math>F</math> unless it's (also) a <math>G</math>.            Only <math>G</math>'s are <math>F</math>'s.            Something is an <math>F</math> only if it's a <math>G</math>.            If something is an <math>F</math>, it is a <math>G</math>.            An <math>F</math> is a <math>G</math>. [Some sentences only]  <math>F</math>'s are all <math>G</math>'s.            A thing is a <math>G</math> if it's an <math>F</math>.</p>	$\forall x(F(x) \rightarrow G(x))$
<p>Some <math>F</math>'s are <math>G</math>'s.            Something is both <math>F</math> and <math>G</math>.            There are <math>GF</math>'s.  <math>GF</math>'s exist.            An <math>F</math> is a <math>G</math>. [Some sentences only]</p>	$\exists x(F(x) \wedge G(x))$
<p>No <math>F</math>'s are <math>G</math>'s.            Nothing which is an <math>F</math> is a <math>G</math>.            Nothing is both <math>F</math> and <math>G</math>.            No <math>F</math> is a <math>G</math>.            Not even one <math>F</math> is a <math>G</math>.</p>	$\forall x(F(x) \rightarrow \neg G(x))$ $\neg \exists x(F(x) \wedge G(x))$ [these are equivalent]
<p>Some <math>F</math>'s are not <math>G</math>'s.            Some things that are <math>F</math> are not <math>G</math>.            There are <math>F</math>'s that aren't <math>G</math>.  <math>F</math>'s exist that are not <math>G</math>.</p>	$\exists x(F(x) \wedge \neg G(x))$
<p>All and only <math>F</math>'s are <math>G</math>'s.            Each thing is an <math>F</math> if, and only if, it's <math>G</math>.            A thing is <math>F</math> if, and only if, it's <math>G</math>.            Something is <math>F</math> just in case it's <math>G</math>.</p>	$\forall x(F(x) \leftrightarrow G(x))$
<p>All things except <math>F</math>'s are <math>G</math>'s.            All things except <math>G</math>'s are <math>F</math>'s.            A thing is an <math>F</math> just in case it's not a <math>G</math>.</p>	$\forall x(F(x) \leftrightarrow \neg G(x))$