1   5.2: Strong induction (continued)

Example using postage stamps

We have three 4 cent stamps.

We have 3×4 cent stamps, or 12 cents total.

Inductive step: will show $\forall j (12 \leq j \leq k) P(j) \to P(k+1)$

Let's look at $k+1$ postage.

Use the postage for $k-3$ (which is doable by our inductive hypothesis) and add a 4 cent stamp to it.

Note $k - 3 + 4 = k + 1$. Hence, $P(k+1)$ is also true.