Solve the following problems and hand in your solutions.

(1) - (9) You should give a proof (you DON'T have to use Latex yet) of your answer for each problem. From the book: 1.1, 1.2, 1.4, 1.7, 1.9, 1.12, 1.13, 1.15, 1.20.

(10) The first sentence of the story *The wall* by Jean-Paul Sartre says

“They pushed us into a big white room and I began to blink because the light hurt my eyes.”

Consider the following statements:

• $P$ = “They pushed us into a big white room”.

• $Q$ = “I began to blink because the light hurt my eyes.”

• $A$ = “I began to blink”.

• $B$ = “light hurt my eyes.”

(a) Negate with words the quoted sentence.

(b) Write with mathematical symbols $Q$ in terms of $A$ and $B$.

(c) Write with mathematical symbols the quoted sentence in terms of $P$, $A$ and $B$.

(d) Negate with mathematical symbols the quoted sentence in terms of $P$, $A$ and $B$.

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1Jean-Paul Sartre, *Le Mur*, New Directions Publisher Corporation, 1948.