

Worksheet: Rules for Partial Correctness

$$\frac{P \rightarrow P' \quad \{P'\} c \{Q'\} \quad Q' \rightarrow Q}{\{P\} c \{Q\}} \text{ IMPLIED}$$

$$\frac{\{P\} c_1 \{R\} \quad \{R\} c_2 \{Q\}}{\{P\} c_1; c_2 \{Q\}} \text{ COMPOSITION}$$

$$\frac{\{P \wedge e\} c_1 \{Q\} \quad \{P \wedge \neg e\} c_2 \{Q\}}{\{P\} \text{ if } (e) c_1 \text{ else } c_2 \{Q\}} \text{ IF}$$

$$\frac{\{I \wedge e\} c \{I\}}{\{I\} \text{ while } (e) c \{I \wedge \neg e\}} \text{ WHILE}$$

$$\frac{}{\{P[e/x]\} x = e; \{P\}} \text{ ASSIGNMENT}$$