

Chapter 1 Section 2 Exercise Solutions

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1 Exercise 1

$$\neg a \implies \neg e$$

2 Exercise 2

$$m \implies e \vee p$$

3 Exercise 3

$$g \implies r \wedge \neg m \wedge \neg b$$

4 Exercise 4

$$\neg s \implies (d \implies w)$$

5 Exercise 5

$$e \implies a \wedge (b \vee p) \wedge r$$

6 Exercise 6

$$u \implies (b_{32} \wedge g_1 \wedge r_1 \wedge h_{16}) \vee (b_{64} \wedge g_2 \wedge r_2 \wedge h_{32})$$

7 Exercise 7

7.1 (a)

$$q \implies p$$

7.2 (b)

$$q \wedge \neg p$$

7.3 (c)

$$q \implies p$$

7.4 (d)

$$\neg q \implies \neg p$$

8 Exercise 8

8.1 (a)

$$r \wedge \neg p$$

8.2 (b)

$$r \wedge p \implies q$$

8.3 (c)

$$\neg r \implies \neg q$$

8.4 (d)

$$\neg p \wedge r \implies q$$