A financial advisor determines the following information about her clients’ portfolios, with regard to their investments in stocks that are of three types: “high-risk / high-return” \( (H) \), “moderate-risk / moderate-return” \( (M) \), and “low-risk / low-return” \( (L) \).

\[
\begin{align*}
(i) & \quad 50\% \text{ have investments in high-risk stocks} \\
(ii) & \quad 90\% \text{ have investments in moderate-risk stocks} \\
(iii) & \quad 55\% \text{ have investments in low-risk stocks} \\
(iv) & \quad 0\% \text{ have only low-risk stocks} \\
(v) & \quad 0\% \text{ have high-risk and low-risk stocks, but no moderate-risk stocks} \\
(vi) & \quad \text{Among high-risk investors, 80\% also have moderate-risk stocks} \\
(vii) & \quad \text{Among high-risk investors, 50\% also have low-risk stocks}
\end{align*}
\]

(a) Express each of the above in terms of a formal probability statement, using events \( H \), \( M \), and \( L \). (5 pts)

(b) Sketch a Venn diagram of the three events \( H \), \( M \), and \( L \), with all probabilities clearly labeled. Show all work! Values with no calculations shown will receive no credit. (15 pts)

Investors who have much of their portfolios tied up in high-risk stocks are considered “aggressive” \( (A) \). After more investigating, she discovers the following information about her clients.

\[
\begin{align*}
(viii) & \quad 16\% \text{ are aggressive investors} \\
(ix) & \quad 100\% \text{ of aggressive investors have high-risk stocks} \\
(x) & \quad 100\% \text{ of investors who only have high-risk stocks are aggressive}
\end{align*}
\]

Express each of the above in terms of a formal probability statement, and answer the following.

(c) Calculate the percentage of aggressive investors, among high-risk stocks. Show all work! (3 pts)

(d) Calculate the percentage of only high-risk stocks, among aggressive investors. Show all work! (2 pts)