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d)
$$\left\{ \begin{array}{l} A_1 = \epsilon \\ A_2 = A_1 a + A_2(a+b) + A_3 a + A_4 b + A_5 a + A_6 a \\ A_3 = A_1 b \\ A_4 = A_3 b + A_6 b \\ A_5 = A_4 a \\ A_6 = A_5 b \end{array} \right.$$

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$$L = A_1 + A_4 + A_5.$$

or a:
$$\left. \begin{array}{l} A_1 = \epsilon; A_3 = b; \\ A_4 = b^2 + A_6 b \\ A_5 = b^2 a + A_6 b a \\ A_6 = A_6 b a b + b^2 a b \end{array} \right\}$$

$$\begin{aligned} A_6 &= b^2 a b (bab)^* \\ A_5 &= b^2 a + b^2 a b (bab)^* b a \\ &= b^2 a + b (bab)^+ b a \\ &= b (\epsilon + (bab)^+) b a \\ &= b (bab)^* b a. \\ A_4 &= b^2 + b^2 a b (bab)^* b \\ &= b^2 + b (bab)^+ b \\ &= b (\epsilon + (bab)^+) b \\ &= b (bab)^* b \end{aligned}$$

$$\begin{aligned} L &= \epsilon + b (bab)^* b \\ &+ b (bab)^* b a \\ &= \epsilon + b (bab)^* b (\epsilon + a) \end{aligned}$$

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