

1.

$$l = 6 \text{ m} \rightarrow 6000 \text{ mm}$$

$$l_{s1} = 0,75 \text{ m} \rightarrow 750 \text{ mm}$$

$$l_{s2} = 87 \text{ mm}$$

$$l_{s3} = 1,3 \text{ m} \rightarrow 1300 \text{ mm}$$

$$l_{s4} = 1540 \text{ mm}$$

$$l_{s5} = 625 \text{ mm}$$

$$s = 1,5 \text{ mm}$$

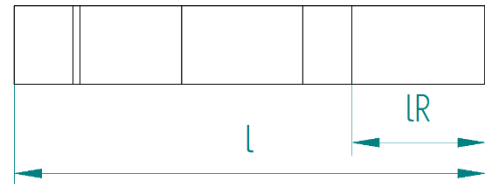
$$l_R = 1690,5 \text{ mm}$$

$$l_R = l - l_s - (s * n)$$

$$l_R = 1690,5 \text{ mm}$$

$$l_s = l_{s1} + l_{s2} + l_{s3} + l_{s4} + l_{s5}$$

$$l_s = 4302 \text{ mm}$$



2.

$$l = 3,4 \text{ m} \rightarrow 3400 \text{ mm}$$

$$n = 5 \text{ Stücke}$$

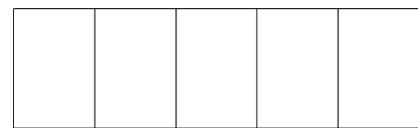
$$a) = 4 \text{ mal}$$

$$p = 678,4 \text{ mm}$$

$$l = p * n + s * (n - 1)$$

$$p = \frac{l - s(n-1)}{n}$$

$$p = 678,4 \text{ mm}$$



3.

$$l = 300 \text{ mm}$$

$$n = 6 \text{ Löcher}$$

$$a = 44,5 \text{ mm}$$

$$b = 44,5 \text{ mm}$$

$$a) p = 42,86 \text{ mm}$$

$$b) p = 42,2 \text{ mm}$$

$$p = \frac{l}{n+1}$$

$$p = 42,86 \text{ mm}$$

$$p = \frac{l - (a+b)}{n-1}$$

$$p = 42,2 \text{ mm}$$



4.

$$l = 800 \text{ mm}$$

$$n = 16 \text{ Löcher}$$

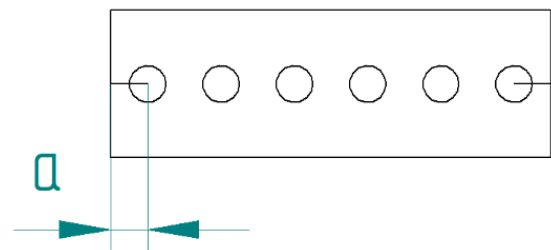
$$a = 25 \text{ mm}$$

$$b = 25 \text{ mm}$$

$$p = 50 \text{ mm}$$

$$p = \frac{l - (a+b)}{n-1}$$

$$p = 50 \text{ mm}$$



5.

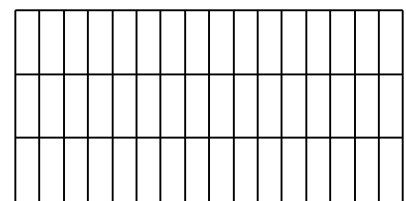
$$l = 2 \text{ m} \rightarrow 2000 \text{ mm}$$

$$n = 15 \text{ Stäbe}$$

$$p = 125 \text{ mm}$$

$$p = \frac{l}{n+1}$$

$$p = 125 \text{ mm}$$



6.

$$l = 2150 \text{ mm}$$

$$p = 70 \text{ mm}$$

$$a = 130 \text{ mm}$$

$$\underline{b = 130 \text{ mm}}$$

$$n = 28 \text{ Stäbe}$$

$$p = \frac{l - (a+b)}{n-1}$$

$$p * (n - 1) = l - (a + b)$$

$$n - 1 = \frac{l - (a+b)}{p}$$

$$n = \frac{l - (a+b)}{p} + 1$$

$$\underline{n = 28 \text{ Stäbe}}$$

7.

$$p = 70 \text{ mm}$$

$$n = 9 \text{ Bohrungen}$$

$$a = 20 \text{ mm}$$

$$\underline{b = 30 \text{ mm}}$$

$$l = 610 \text{ mm}$$

$$p = \frac{l - (a+b)}{n-1}$$

$$p * (n - 1) = l - (a + b)$$

$$l = p * (n - 1) + (a + b)$$

$$\underline{l = 610 \text{ mm}}$$

8.

$$p = 80 \text{ mm}$$

$$d = 12 \text{ mm}$$

$$\underline{l = 4,148 \text{ m} \rightarrow 4148 \text{ mm}}$$

$$x = 68 \text{ mm}$$

$$n = 51 \text{ Stäbe}$$

$$x = p - d$$

$$\underline{x = 68 \text{ mm}}$$

$$p = \frac{l}{n}$$

$$n = \frac{l}{p}$$

$$n = 51,85 \text{ Stäbe} \rightarrow 51 \text{ Stäbe}$$

9.

$$p = 60 \text{ mm}$$

$$a = 200 \text{ mm}$$

$$b = 200 \text{ mm}$$

$$l_1 = 1840 \text{ mm}$$

$$\underline{l_2 = 1120 \text{ mm}}$$

$$n_1 = 25 \text{ Löcher}$$

$$n_2 = 11 \text{ Löcher}$$

$$n = 72 \text{ Löcher}$$

$$p = \frac{l_1 - (a+b)}{n-1}$$

$$n_1 = \frac{l_1 - (a+b)}{p} + 1$$

$$\underline{n_1 = 25 \text{ Stäbe}}$$

$$p = \frac{l_2 - (a+b)}{n+1}$$

$$n_2 = \frac{l_2 - (a+b)}{p} - 1$$

$$\underline{n_2 = 11 \text{ Stäbe}}$$

$$n = (n_1 + n_2) * 2$$

$$\underline{n = 72 \text{ Stäbe}}$$

10.

$$l_1 = 200 \text{ mm}$$

$$l_{s1} = 10 \text{ mm}$$

$$a_1 = 20 \text{ mm}$$

$$b_1 = 40 \text{ mm}$$

$$n_1 = 6 \text{ Stück}$$

$$l_2 = 180 \text{ mm}$$

$$l_{s2} = 70 \text{ mm}$$

$$a_2 = 15 \text{ mm}$$

$$b_2 = 15 \text{ mm}$$

$$\underline{n_2 = 1 \text{ Stück}}$$

$$x = 16 \text{ mm}$$

$$y = 80 \text{ mm}$$

$$x = \frac{l_1 - (a_1 + b_1) - (l_{s1} * n_1)}{n_1 - 1}$$

$$\underline{x = 16 \text{ mm}}$$

$$y = l_2 - (a_2 + b_2) - (l_{s2} * n_2) \text{ (Sonderfall nur 1 Stk.)}$$

$$\underline{y = 80 \text{ mm}}$$
