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•
$$k = 0$$
: $N_0 = 2324 = 2q_0 + r_0$

$$a) \ 2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1}...a_2 a_1 a_0)_2$$

$$\bullet \ k = 0: \ N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0$$

$$a) \ 2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$

$$\bullet \ k = 0: \ N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$$

$$k = 1:$$

a)
$$2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
• $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$
$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1$

$$a) \ 2324.6 = 2324 + 0.6 \to N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$

$$\bullet \ k = 0: \ N_0 = 2324 = 2q_0 + r_0 \to q_0 = \boxed{1162} \land r_0 = 0 \to \boxed{a_0 = 0}$$

$$k = 1: \ N_1 = \boxed{1162} = 2q_1 + r_1 \to q_1 = \boxed{581} \land r_1 = 0$$

$$a) \ 2324.6 = 2324 + 0.6 \to N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
 • $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \to q_0 = \boxed{1162} \land r_0 = 0 \to \boxed{a_0 = 0}$
$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \to q_1 = \boxed{581} \land r_1 = 0 \to \boxed{a_1 = 0}$
$$k = 2$$
:

$$a) \ 2324.6 = 2324 + 0.6 \to N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
 • $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \to q_0 = \boxed{1162} \land r_0 = 0 \to \boxed{a_0 = 0}$
$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \to q_1 = \boxed{581} \land r_1 = 0 \to \boxed{a_1 = 0}$
$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2$

$$a) \ 2324.6 = 2324 + 0.6 \to N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
 • $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \to q_0 = \boxed{1162} \land r_0 = 0 \to \boxed{a_0 = 0}$
$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \to q_1 = \boxed{581} \land r_1 = 0 \to \boxed{a_1 = 0}$
$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \to q_2 = \boxed{290} \land r_2 = 1$

$$a) \ 2324.6 = 2324 + 0.6 \to N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
 • $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \to q_0 = \boxed{1162} \land r_0 = 0 \to \boxed{a_0 = 0}$
$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \to q_1 = \boxed{581} \land r_1 = 0 \to \boxed{a_1 = 0}$
$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \to q_2 = \boxed{290} \land r_2 = 1 \to \boxed{a_2 = 1}$
$$k = 3$$
:

$$a) \ 2324.6 = 2324 + 0.6 \to N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$

$$\bullet \ k = 0: \ N_0 = 2324 = 2q_0 + r_0 \to q_0 = \boxed{1162} \land r_0 = 0 \to \boxed{a_0 = 0}$$

$$k = 1: \ N_1 = \boxed{1162} = 2q_1 + r_1 \to q_1 = \boxed{581} \land r_1 = 0 \to \boxed{a_1 = 0}$$

$$k = 2: \ N_2 = \boxed{581} = 2q_2 + r_2 \to q_2 = \boxed{290} \land r_2 = 1 \to \boxed{a_2 = 1}$$

$$k = 3: \ N_3 = \boxed{290} = 2q_3 + r_3$$

$$a) \ 2324.6 = 2324 + 0.6 \to N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$

$$\bullet \ k = 0: \ N_0 = 2324 = 2q_0 + r_0 \to q_0 = \boxed{1162} \land r_0 = 0 \to \boxed{a_0 = 0}$$

$$k = 1: \ N_1 = \boxed{1162} = 2q_1 + r_1 \to q_1 = \boxed{581} \land r_1 = 0 \to \boxed{a_1 = 0}$$

$$k = 2: \ N_2 = \boxed{581} = 2q_2 + r_2 \to q_2 = \boxed{290} \land r_2 = 1 \to \boxed{a_2 = 1}$$

$$k = 3: \ N_3 = \boxed{290} = 2q_3 + r_3 \to q_3 = \boxed{145} \land r_3 = 0$$

$$a) \ 2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
 • $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$
$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$
$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$
$$k = 3$$
: $N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$
$$k = 4$$
:

$$a) \ 2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
 • $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$
$$k = 1 : \ N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$$

$$k = 2 : \ N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$$

$$k = 3 : \ N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$$

$$k = 4 : \ N_4 = \boxed{145} = 2q_4 + r_4$$

$$a) \ 2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
 • $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$
$$k = 1 : \ N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$$

$$k = 2 : \ N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$$

$$k = 3 : \ N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$$

$$k = 4 : \ N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1$$

$$a) \ 2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
 • $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$
$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$
$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$
$$k = 3$$
: $N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$
$$k = 4$$
: $N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$
$$k = 5$$
:

$$a) \ 2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$

$$\bullet \ k = 0 : \ N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$$

$$k = 1 : \ N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$$

$$k = 2 : \ N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$$

$$k = 3 : \ N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$$

$$k = 4 : \ N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$$

$$k = 5 : \ N_2 = \boxed{72} = 2q_5 + r_5$$

$$a) \ 2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
 • $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$
$$k = 1 : \ N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$$

$$k = 2 : \ N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$$

$$k = 3 : \ N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$$

$$k = 4 : \ N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$$

$$k = 5 : \ N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0$$

a)
$$2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
• $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$

$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$

$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$

$$k = 3$$
: $N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$

$$k = 4$$
: $N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$

$$k = 5$$
: $N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0 \rightarrow \boxed{a_5 = 0}$

$$k = 6$$
:

$$a) \ 2324.6 = 2324 + 0.6 \to N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$

$$\bullet \ k = 0: \ N_0 = 2324 = 2q_0 + r_0 \to q_0 = \boxed{1162} \land r_0 = 0 \to \boxed{a_0 = 0}$$

$$k = 1: \ N_1 = \boxed{1162} = 2q_1 + r_1 \to q_1 = \boxed{581} \land r_1 = 0 \to \boxed{a_1 = 0}$$

$$k = 2: \ N_2 = \boxed{581} = 2q_2 + r_2 \to q_2 = \boxed{290} \land r_2 = 1 \to \boxed{a_2 = 1}$$

$$k = 3: \ N_3 = \boxed{290} = 2q_3 + r_3 \to q_3 = \boxed{145} \land r_3 = 0 \to \boxed{a_3 = 0}$$

$$k = 4: \ N_4 = \boxed{145} = 2q_4 + r_4 \to q_4 = \boxed{72} \land r_4 = 1 \to \boxed{a_4 = 1}$$

$$k = 5: \ N_2 = \boxed{72} = 2q_5 + r_5 \to q_5 = \boxed{36} \land r_5 = 0 \to \boxed{a_5 = 0}$$

$$k = 6: \ N_6 = \boxed{36} = 2q_6 + r_6$$

$$a) \ 2324.6 = 2324 + 0.6 \to N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$

$$\bullet \ k = 0: \ N_0 = 2324 = 2q_0 + r_0 \to q_0 = \boxed{1162} \land r_0 = 0 \to \boxed{a_0 = 0}$$

$$k = 1: \ N_1 = \boxed{1162} = 2q_1 + r_1 \to q_1 = \boxed{581} \land r_1 = 0 \to \boxed{a_1 = 0}$$

$$k = 2: \ N_2 = \boxed{581} = 2q_2 + r_2 \to q_2 = \boxed{290} \land r_2 = 1 \to \boxed{a_2 = 1}$$

$$k = 3: \ N_3 = \boxed{290} = 2q_3 + r_3 \to q_3 = \boxed{145} \land r_3 = 0 \to \boxed{a_3 = 0}$$

$$k = 4: \ N_4 = \boxed{145} = 2q_4 + r_4 \to q_4 = \boxed{72} \land r_4 = 1 \to \boxed{a_4 = 1}$$

$$k = 5: \ N_2 = \boxed{72} = 2q_5 + r_5 \to q_5 = \boxed{36} \land r_5 = 0 \to \boxed{a_5 = 0}$$

$$k = 6: \ N_6 = \boxed{36} = 2q_6 + r_6 \to q_6 = \boxed{18} \land r_6 = 0$$

a)
$$2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
• $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$

$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$

$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$

$$k = 3$$
: $N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$

$$k = 4$$
: $N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$

$$k = 5$$
: $N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0 \rightarrow \boxed{a_5 = 0}$

$$k = 6$$
: $N_6 = \boxed{36} = 2q_6 + r_6 \rightarrow q_6 = \boxed{18} \land r_6 = 0 \rightarrow \boxed{a_6 = 0}$

$$k = 7$$
:

$$a) \ 2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$

$$\bullet \ k = 0: \ N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$$

$$k = 1: \ N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$$

$$k = 2: \ N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$$

$$k = 3: \ N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$$

$$k = 4: \ N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$$

$$k = 5: \ N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0 \rightarrow \boxed{a_5 = 0}$$

$$k = 6: \ N_6 = \boxed{36} = 2q_6 + r_6 \rightarrow q_6 = \boxed{18} \land r_6 = 0 \rightarrow \boxed{a_6 = 0}$$

$$k = 7: \ N_7 = \boxed{18} = 2q_7 + r_7$$

a)
$$2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
• $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$

$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$

$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$

$$k = 3$$
: $N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$

$$k = 4$$
: $N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$

$$k = 5$$
: $N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0 \rightarrow \boxed{a_5 = 0}$

$$k = 6$$
: $N_6 = \boxed{36} = 2q_6 + r_6 \rightarrow q_6 = \boxed{18} \land r_6 = 0 \rightarrow \boxed{a_6 = 0}$

$$k = 7$$
: $N_7 = \boxed{18} = 2q_7 + r_7 \rightarrow q_7 = \boxed{9} \land r_7 = 0$

$$a) \ 2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_{j}a_{j-1}...a_{2}a_{1}a_{0})_{2}$$
• $k = 0$: $N_{0} = 2324 = 2q_{0} + r_{0} \rightarrow q_{0} = \boxed{1162} \land r_{0} = 0 \rightarrow \boxed{a_{0} = 0}$

$$k = 1$$
: $N_{1} = \boxed{1162} = 2q_{1} + r_{1} \rightarrow q_{1} = \boxed{581} \land r_{1} = 0 \rightarrow \boxed{a_{1} = 0}$

$$k = 2$$
: $N_{2} = \boxed{581} = 2q_{2} + r_{2} \rightarrow q_{2} = \boxed{290} \land r_{2} = 1 \rightarrow \boxed{a_{2} = 1}$

$$k = 3$$
: $N_{3} = \boxed{290} = 2q_{3} + r_{3} \rightarrow q_{3} = \boxed{145} \land r_{3} = 0 \rightarrow \boxed{a_{3} = 0}$

$$k = 4$$
: $N_{4} = \boxed{145} = 2q_{4} + r_{4} \rightarrow q_{4} = \boxed{72} \land r_{4} = 1 \rightarrow \boxed{a_{4} = 1}$

$$k = 5$$
: $N_{2} = \boxed{72} = 2q_{5} + r_{5} \rightarrow q_{5} = \boxed{36} \land r_{5} = 0 \rightarrow \boxed{a_{5} = 0}$

$$k = 6$$
: $N_{6} = \boxed{36} = 2q_{6} + r_{6} \rightarrow q_{6} = \boxed{18} \land r_{6} = 0 \rightarrow \boxed{a_{6} = 0}$

$$k = 7$$
: $N_{7} = \boxed{18} = 2q_{7} + r_{7} \rightarrow q_{7} = \boxed{9} \land r_{7} = 0 \rightarrow \boxed{a_{7} = 0}$

$$k = 8$$
:

a)
$$2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
• $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$

$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$

$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$

$$k = 3$$
: $N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$

$$k = 4$$
: $N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$

$$k = 5$$
: $N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0 \rightarrow \boxed{a_5 = 0}$

$$k = 6$$
: $N_6 = \boxed{36} = 2q_6 + r_6 \rightarrow q_6 = \boxed{18} \land r_6 = 0 \rightarrow \boxed{a_6 = 0}$

$$k = 7$$
: $N_7 = \boxed{18} = 2q_7 + r_7 \rightarrow q_7 = \boxed{9} \land r_7 = 0 \rightarrow \boxed{a_7 = 0}$

$$k = 8$$
: $N_8 = \boxed{9} = 2q_8 + r_8$

a)
$$2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
• $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$

$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$

$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$

$$k = 3$$
: $N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$

$$k = 4$$
: $N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$

$$k = 5$$
: $N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0 \rightarrow \boxed{a_5 = 0}$

$$k = 6$$
: $N_6 = \boxed{36} = 2q_6 + r_6 \rightarrow q_6 = \boxed{18} \land r_6 = 0 \rightarrow \boxed{a_6 = 0}$

$$k = 7$$
: $N_7 = \boxed{18} = 2q_7 + r_7 \rightarrow q_7 = \boxed{9} \land r_7 = 0 \rightarrow \boxed{a_7 = 0}$

$$k = 8$$
: $N_8 = \boxed{9} = 2q_8 + r_8 \rightarrow q_8 = \boxed{4} \land r_8 = 1$

a)
$$2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
• $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$

$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$

$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$

$$k = 3$$
: $N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$

$$k = 4$$
: $N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$

$$k = 5$$
: $N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0 \rightarrow \boxed{a_5 = 0}$

$$k = 6$$
: $N_6 = \boxed{36} = 2q_6 + r_6 \rightarrow q_6 = \boxed{18} \land r_6 = 0 \rightarrow \boxed{a_6 = 0}$

$$k = 7$$
: $N_7 = \boxed{18} = 2q_7 + r_7 \rightarrow q_7 = \boxed{9} \land r_7 = 0 \rightarrow \boxed{a_7 = 0}$

$$k = 8$$
: $N_8 = \boxed{9} = 2q_8 + r_8 \rightarrow q_8 = \boxed{4} \land r_8 = 1 \rightarrow \boxed{a_8 = 1}$

$$k = 9$$
:

a)
$$2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
• $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$

$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$

$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$

$$k = 3$$
: $N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$

$$k = 4$$
: $N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$

$$k = 5$$
: $N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0 \rightarrow \boxed{a_5 = 0}$

$$k = 6$$
: $N_6 = \boxed{36} = 2q_6 + r_6 \rightarrow q_6 = \boxed{18} \land r_6 = 0 \rightarrow \boxed{a_6 = 0}$

$$k = 7$$
: $N_7 = \boxed{18} = 2q_7 + r_7 \rightarrow q_7 = \boxed{9} \land r_7 = 0 \rightarrow \boxed{a_7 = 0}$

$$k = 8$$
: $N_8 = \boxed{9} = 2q_8 + r_8 \rightarrow q_8 = \boxed{4} \land r_8 = 1 \rightarrow \boxed{a_8 = 1}$

$$k = 9$$
: $N_9 = \boxed{4} = 2q_9 + r_9$

a)
$$2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
• $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$

$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$

$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$

$$k = 3$$
: $N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$

$$k = 4$$
: $N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$

$$k = 5$$
: $N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0 \rightarrow \boxed{a_5 = 0}$

$$k = 6$$
: $N_6 = \boxed{36} = 2q_6 + r_6 \rightarrow q_6 = \boxed{18} \land r_6 = 0 \rightarrow \boxed{a_6 = 0}$

$$k = 7$$
: $N_7 = \boxed{18} = 2q_7 + r_7 \rightarrow q_7 = \boxed{9} \land r_7 = 0 \rightarrow \boxed{a_7 = 0}$

$$k = 8$$
: $N_8 = \boxed{9} = 2q_8 + r_8 \rightarrow q_8 = \boxed{4} \land r_8 = 1 \rightarrow \boxed{a_8 = 1}$

$$k = 9$$
: $N_9 = \boxed{4} = 2q_9 + r_9 \rightarrow q_9 = \boxed{2} \land r_9 = 0$

a)
$$2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
• $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$

$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$

$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$

$$k = 3$$
: $N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$

$$k = 4$$
: $N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$

$$k = 5$$
: $N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0 \rightarrow \boxed{a_5 = 0}$

$$k = 6$$
: $N_6 = \boxed{36} = 2q_6 + r_6 \rightarrow q_6 = \boxed{18} \land r_6 = 0 \rightarrow \boxed{a_6 = 0}$

$$k = 7$$
: $N_7 = \boxed{18} = 2q_7 + r_7 \rightarrow q_7 = \boxed{9} \land r_7 = 0 \rightarrow \boxed{a_7 = 0}$

$$k = 8$$
: $N_8 = \boxed{9} = 2q_8 + r_8 \rightarrow q_8 = \boxed{4} \land r_8 = 1 \rightarrow \boxed{a_8 = 1}$

$$k = 9$$
: $N_9 = \boxed{4} = 2q_9 + r_9 \rightarrow q_9 = \boxed{2} \land r_9 = 0 \rightarrow \boxed{a_9 = 0}$

k = 10:

$$a) \ 2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$

$$\bullet \ k = 0: \ N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$$

$$k = 1: \ N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$$

$$k = 2: \ N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$$

$$k = 3: \ N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$$

$$k = 4: \ N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$$

$$k = 5: \ N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0 \rightarrow \boxed{a_5 = 0}$$

$$k = 6: \ N_6 = \boxed{36} = 2q_6 + r_6 \rightarrow q_6 = \boxed{18} \land r_6 = 0 \rightarrow \boxed{a_6 = 0}$$

$$k = 7: \ N_7 = \boxed{18} = 2q_7 + r_7 \rightarrow q_7 = \boxed{9} \land r_7 = 0 \rightarrow \boxed{a_7 = 0}$$

 $k = 8: N_8 = 9 = 2q_8 + r_8 \rightarrow q_8 = 4 \land r_8 = 1 \rightarrow a_8 = 1$ $k = 9: N_9 = 4 = 2q_9 + r_9 \rightarrow q_9 = 2 \land r_9 = 0 \rightarrow a_9 = 0$

 $k = 10: N_{10} = 2 = 2q_{10} + r_{10}$

a)
$$2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
• $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$

$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$

$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$

$$k = 3$$
: $N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$

$$k = 4$$
: $N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$

$$k = 5$$
: $N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0 \rightarrow \boxed{a_5 = 0}$

$$k = 6$$
: $N_6 = \boxed{36} = 2q_6 + r_6 \rightarrow q_6 = \boxed{18} \land r_6 = 0 \rightarrow \boxed{a_6 = 0}$

$$k = 7$$
: $N_7 = \boxed{18} = 2q_7 + r_7 \rightarrow q_7 = \boxed{9} \land r_7 = 0 \rightarrow \boxed{a_7 = 0}$

$$k = 8$$
: $N_8 = \boxed{9} = 2q_8 + r_8 \rightarrow q_8 = \boxed{4} \land r_8 = 1 \rightarrow \boxed{a_8 = 1}$

$$k = 9$$
: $N_9 = \boxed{4} = 2q_9 + r_9 \rightarrow q_9 = \boxed{2} \land r_9 = 0 \rightarrow \boxed{a_9 = 0}$

$$k = 10$$
: $N_{10} = \boxed{2} = 2q_{10} + r_{10} \rightarrow q_{10} = \boxed{1} \land r_{10} = 0$

a)
$$2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
• $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$

$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$

$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$

$$k = 3$$
: $N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$

$$k = 4$$
: $N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$

$$k = 5$$
: $N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0 \rightarrow \boxed{a_5 = 0}$

$$k = 6$$
: $N_6 = \boxed{36} = 2q_6 + r_6 \rightarrow q_6 = \boxed{18} \land r_6 = 0 \rightarrow \boxed{a_6 = 0}$

$$k = 7$$
: $N_7 = \boxed{18} = 2q_7 + r_7 \rightarrow q_7 = \boxed{9} \land r_7 = 0 \rightarrow \boxed{a_7 = 0}$

$$k = 8$$
: $N_8 = \boxed{9} = 2q_8 + r_8 \rightarrow q_8 = \boxed{4} \land r_8 = 1 \rightarrow \boxed{a_8 = 1}$

$$k = 9$$
: $N_9 = \boxed{4} = 2q_9 + r_9 \rightarrow q_9 = \boxed{2} \land r_9 = 0 \rightarrow \boxed{a_9 = 0}$

$$k = 10$$
: $N_{10} = \boxed{2} = 2q_{10} + r_{10} \rightarrow q_{10} = \boxed{1} \land r_{10} = 0 \rightarrow \boxed{a_{10} = 0}$

$$k = 11$$
:

a)
$$2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
• $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$

$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$

$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$

$$k = 3$$
: $N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$

$$k = 4$$
: $N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$

$$k = 5$$
: $N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0 \rightarrow \boxed{a_5 = 0}$

$$k = 6$$
: $N_6 = \boxed{36} = 2q_6 + r_6 \rightarrow q_6 = \boxed{18} \land r_6 = 0 \rightarrow \boxed{a_6 = 0}$

$$k = 7$$
: $N_7 = \boxed{18} = 2q_7 + r_7 \rightarrow q_7 = \boxed{9} \land r_7 = 0 \rightarrow \boxed{a_7 = 0}$

$$k = 8$$
: $N_8 = \boxed{9} = 2q_8 + r_8 \rightarrow q_8 = \boxed{4} \land r_8 = 1 \rightarrow \boxed{a_8 = 1}$

$$k = 9$$
: $N_9 = \boxed{4} = 2q_9 + r_9 \rightarrow q_9 = \boxed{2} \land r_9 = 0 \rightarrow \boxed{a_9 = 0}$

$$k = 10$$
: $N_{10} = \boxed{2} = 2q_{10} + r_{10} \rightarrow q_{10} = \boxed{1} \land r_{10} = 0 \rightarrow \boxed{a_{10} = 0}$

$$k = 11$$
: $N_{11} = \boxed{1} = 2q_{11} + r_{11}$

a)
$$2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
• $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$

$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$

$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$

$$k = 3$$
: $N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$

$$k = 4$$
: $N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$

$$k = 5$$
: $N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0 \rightarrow \boxed{a_5 = 0}$

$$k = 6$$
: $N_6 = \boxed{36} = 2q_6 + r_6 \rightarrow q_6 = \boxed{18} \land r_6 = 0 \rightarrow \boxed{a_6 = 0}$

$$k = 7$$
: $N_7 = \boxed{18} = 2q_7 + r_7 \rightarrow q_7 = \boxed{9} \land r_7 = 0 \rightarrow \boxed{a_7 = 0}$

$$k = 8$$
: $N_8 = \boxed{9} = 2q_8 + r_8 \rightarrow q_8 = \boxed{4} \land r_8 = 1 \rightarrow \boxed{a_8 = 1}$

$$k = 9$$
: $N_9 = \boxed{4} = 2q_9 + r_9 \rightarrow q_9 = \boxed{2} \land r_9 = 0 \rightarrow \boxed{a_9 = 0}$

$$k = 10$$
: $N_{10} = \boxed{2} = 2q_{10} + r_{10} \rightarrow q_{10} = \boxed{1} \land r_{10} = 0 \rightarrow \boxed{a_{10} = 0}$

$$k = 11$$
: $N_{11} = \boxed{1} = 2q_{11} + r_{11} \rightarrow q_{11} = \boxed{0} \land r_{11} = 1$

a)
$$2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
• $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$

$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$

$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$

$$k = 3$$
: $N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$

$$k = 4$$
: $N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$

$$k = 5$$
: $N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0 \rightarrow \boxed{a_5 = 0}$

$$k = 6$$
: $N_6 = \boxed{36} = 2q_6 + r_6 \rightarrow q_6 = \boxed{18} \land r_6 = 0 \rightarrow \boxed{a_6 = 0}$

$$k = 7$$
: $N_7 = \boxed{18} = 2q_7 + r_7 \rightarrow q_7 = \boxed{9} \land r_7 = 0 \rightarrow \boxed{a_7 = 0}$

$$k = 8$$
: $N_8 = \boxed{9} = 2q_8 + r_8 \rightarrow q_8 = \boxed{4} \land r_8 = 1 \rightarrow \boxed{a_8 = 1}$

$$k = 9$$
: $N_9 = \boxed{4} = 2q_9 + r_9 \rightarrow q_9 = \boxed{2} \land r_9 = 0 \rightarrow \boxed{a_9 = 0}$

$$k = 10$$
: $N_{10} = \boxed{2} = 2q_{10} + r_{10} \rightarrow q_{10} = \boxed{1} \land r_{10} = 0 \rightarrow \boxed{a_{10} = 0}$

$$k = 11$$
: $N_{11} = \boxed{1} = 2q_{11} + r_{11} \rightarrow q_{11} = \boxed{0} \land r_{11} = 1 \rightarrow \boxed{a_{11} = 1}$

a)
$$2324.6 = 2324 + 0.6 \rightarrow N = 2324 \ y \ r = 0.6$$

$$N = 2324 = (a_j a_{j-1} ... a_2 a_1 a_0)_2$$
• $k = 0$: $N_0 = 2324 = 2q_0 + r_0 \rightarrow q_0 = \boxed{1162} \land r_0 = 0 \rightarrow \boxed{a_0 = 0}$

$$k = 1$$
: $N_1 = \boxed{1162} = 2q_1 + r_1 \rightarrow q_1 = \boxed{581} \land r_1 = 0 \rightarrow \boxed{a_1 = 0}$

$$k = 2$$
: $N_2 = \boxed{581} = 2q_2 + r_2 \rightarrow q_2 = \boxed{290} \land r_2 = 1 \rightarrow \boxed{a_2 = 1}$

$$k = 3$$
: $N_3 = \boxed{290} = 2q_3 + r_3 \rightarrow q_3 = \boxed{145} \land r_3 = 0 \rightarrow \boxed{a_3 = 0}$

$$k = 4$$
: $N_4 = \boxed{145} = 2q_4 + r_4 \rightarrow q_4 = \boxed{72} \land r_4 = 1 \rightarrow \boxed{a_4 = 1}$

$$k = 5$$
: $N_2 = \boxed{72} = 2q_5 + r_5 \rightarrow q_5 = \boxed{36} \land r_5 = 0 \rightarrow \boxed{a_5 = 0}$

$$k = 6$$
: $N_6 = \boxed{36} = 2q_6 + r_6 \rightarrow q_6 = \boxed{18} \land r_6 = 0 \rightarrow \boxed{a_6 = 0}$

$$k = 7$$
: $N_7 = \boxed{18} = 2q_7 + r_7 \rightarrow q_7 = \boxed{9} \land r_7 = 0 \rightarrow \boxed{a_7 = 0}$

$$k = 8$$
: $N_8 = \boxed{9} = 2q_8 + r_8 \rightarrow q_8 = \boxed{4} \land r_8 = 1 \rightarrow \boxed{a_8 = 1}$

$$k = 9$$
: $N_9 = \boxed{4} = 2q_9 + r_9 \rightarrow q_9 = \boxed{2} \land r_9 = 0 \rightarrow \boxed{a_9 = 0}$

$$k = 10$$
: $N_{10} = \boxed{2} = 2q_{10} + r_{10} \rightarrow q_{10} = \boxed{1} \land r_{10} = 0 \rightarrow \boxed{a_{10} = 0}$

$$k = 11$$
: $N_{11} = \boxed{1} = 2q_{11} + r_{11} \rightarrow q_{11} = \boxed{0} \land r_{11} = 1 \rightarrow \boxed{a_{11} = 1}$

$$N = 2324 = 100100010100(2)$$

²/∢□▶∢∰▶∢≣▶∢≣▶ ≣ ∽9<0

$$r = 0.6 = (0.d_1d_2...d_j...)_2$$

• k = 1

$$r = 0.6 = (0.d_1d_2...d_j...)_2$$

•
$$k = 1$$
; $2r_1 = 1.2$

$$r = 0.6 = (0.d_1d_2...d_j...)_2$$

•
$$k = 1 \; ; \; 2r_1 = 1.2 \; \to \; \boxed{d_1 = 1}$$

$$r = 0.6 = (0.d_1d_2...d_j...)_2$$

•
$$k = 1 \; ; \; 2r_1 = 1.2 \; \to \; d_1 = 1$$

$$\to r_2 = 1.2 - 1 = 0.2$$

$$r = 0.6 = (0.d_1d_2...d_j...)_2$$

•
$$k = 1 \; ; \; 2r_1 = 1.2 \; \to \; \boxed{d_1 = 1}$$

$$\to r_2 = 1.2 - 1 = 0.2$$

•
$$k = 2$$

$$r = 0.6 = (0.d_1d_2...d_j...)_2$$

•
$$k = 1$$
; $2r_1 = 1.2 \rightarrow d_1 = 1$
 $\rightarrow r_2 = 1.2 - 1 = 0.2$

•
$$k=2$$
 ; $2r_2=0.4$

$$r = 0.6 = (0.d_1d_2...d_j...)_2$$

•
$$k = 1 \; ; \; 2r_1 = 1.2 \; \to \; d_1 = 1$$

$$\rightarrow r_2 = 1.2 - 1 = 0.2$$

•
$$k=2$$
; $2r_2=0.4 \rightarrow d_2=0$

$$r = 0.6 = (0.d_1d_2...d_j...)_2$$

•
$$k = 1 \; ; \; 2r_1 = 1.2 \; \to \; d_1 = 1$$

$$\to r_2 = 1.2 - 1 = 0.2$$

•
$$k = 2$$
; $2r_2 = 0.4 \rightarrow d_2 = 0$

$$\to r_3 = 0.4 - 0 = 0.4$$

$$r = 0.6 = (0.d_1d_2...d_j...)_2$$

•
$$k = 1 \; ; \; 2r_1 = 1.2 \; \to \; d_1 = 1$$

$$\rightarrow r_2 = 1.2 - 1 = 0.2$$

•
$$k = 2 \; ; \; 2r_2 = 0.4 \; \to \; \boxed{d_2 = 0}$$

$$\to r_3 = 0.4 - 0 = 0.4$$

•
$$k = 3$$

$$r = 0.6 = (0.d_1d_2...d_j...)_2$$

•
$$k = 1$$
; $2r_1 = 1.2 \rightarrow d_1 = 1$

$$\to r_2 = 1.2 - 1 = 0.2$$

•
$$k = 2$$
; $2r_2 = 0.4 \rightarrow d_2 = 0$

$$\to r_3 = 0.4 - 0 = 0.4$$

•
$$k = 3$$
; $2r_3 = 0.8$

$$r = 0.6 = (0.d_1d_2...d_j...)_2$$

•
$$k = 1$$
; $2r_1 = 1.2 \rightarrow d_1 = 1$

$$\rightarrow r_2 = 1.2 - 1 = 0.2$$

•
$$k = 2$$
; $2r_2 = 0.4 \rightarrow d_2 = 0$
 $\rightarrow r_3 = 0.4 - 0 = 0.4$

•
$$k = 3$$
; $2r_3 = 0.8 \rightarrow \boxed{d_3 = 0}$

$$r = 0.6 = (0.d_1d_2...d_j...)_2$$

•
$$k = 1$$
; $2r_1 = 1.2 \rightarrow d_1 = 1$
 $\rightarrow r_2 = 1.2 - 1 = 0.2$

$$\rightarrow r_2 = 1.2 - 1 = 0.$$

•
$$k = 2$$
; $2r_2 = 0.4 \rightarrow d_2 = 0$
 $\rightarrow r_3 = 0.4 - 0 = 0.4$

$$\rightarrow r_3 = 0.4 - 0 = 0$$
• $k = 3$; $2r_3 = 0.8 \rightarrow d_3 = 0$

$$\rightarrow r_4 = 0.8 - 0 = 0.8$$

$$r = 0.6 = (0.d_1d_2...d_i...)_2$$

•
$$k = 1$$
; $2r_1 = 1.2 \rightarrow d_1 = 1$
 $\rightarrow r_2 = 1.2 - 1 = 0.2$

•
$$k = 2$$
; $2r_2 = 0.4 \rightarrow d_2 = 0$

$$\to r_3 = 0.4 - 0 = 0.4$$

•
$$k = 3$$
; $2r_3 = 0.8 \rightarrow d_3 = 0$

$$\rightarrow r_4 = 0.8 - 0 = 0.8$$

•
$$k = 4$$

$$r = 0.6 = (0.d_1d_2...d_i...)_2$$

•
$$k = 1$$
; $2r_1 = 1.2 \rightarrow d_1 = 1$
 $\rightarrow r_2 = 1.2 - 1 = 0.2$

•
$$k = 2$$
; $2r_2 = 0.4 \rightarrow d_2 = 0$
 $\rightarrow r_3 = 0.4 - 0 = 0.4$

•
$$k = 3$$
; $2r_3 = 0.8 \rightarrow \boxed{d_3 = 0}$
 $\rightarrow r_4 = 0.8 - 0 = 0.8$

•
$$k = 4$$
; $2r_4 = 1.6$

$$r = 0.6 = (0.d_1d_2...d_j...)_2$$

•
$$k = 1$$
; $2r_1 = 1.2 \rightarrow d_1 = 1$
 $\rightarrow r_2 = 1.2 - 1 = 0.2$

•
$$k = 2$$
; $2r_2 = 0.4 \rightarrow d_2 = 0$
 $\rightarrow r_3 = 0.4 - 0 = 0.4$

•
$$k = 3$$
; $2r_3 = 0.8 \rightarrow \boxed{d_3 = 0}$
 $\rightarrow r_4 = 0.8 - 0 = 0.8$

•
$$k = 4$$
; $2r_4 = 1.6 \rightarrow d_4 = 1$

$$r = 0.6 = (0.d_1d_2...d_i...)_2$$

•
$$k = 1$$
; $2r_1 = 1.2 \rightarrow d_1 = 1$
 $\rightarrow r_2 = 1.2 - 1 = 0.2$

•
$$k = 2$$
; $2r_2 = 0.4 \rightarrow d_2 = 0$
 $\rightarrow r_3 = 0.4 - 0 = 0.4$

•
$$k = 3$$
; $2r_3 = 0.8 \rightarrow d_3 = 0$

$$\rightarrow r_5 = 1.6 - 1 = 0.6$$

$$r = 0.6 = (0.d_1d_2...d_i...)_2$$

•
$$k = 1$$
; $2r_1 = 1.2 \rightarrow d_1 = 1$
 $\rightarrow r_2 = 1.2 - 1 = 0.2$

•
$$k = 2$$
; $2r_2 = 0.4 \rightarrow d_2 = 0$
 $\rightarrow r_3 = 0.4 - 0 = 0.4$

•
$$k = 3$$
; $2r_3 = 0.8 \rightarrow \boxed{d_3 = 0}$

•
$$k = 4$$
; $2r_4 = 1.6 \rightarrow d_4 = 1$
 $\rightarrow r_5 = 1.6 - 1 = 0.6$

$$r = 0.6 = (0.d_1d_2...d_i...)_2$$

•
$$k = 1$$
; $2r_1 = 1.2 \rightarrow d_1 = 1$
 $\rightarrow r_2 = 1.2 - 1 = 0.2$

•
$$k = 2$$
; $2r_2 = 0.4 \rightarrow d_2 = 0$
 $\rightarrow r_3 = 0.4 - 0 = 0.4$

•
$$k = 3$$
; $2r_3 = 0.8 \rightarrow d_3 = 0$

$$k = 3$$
, $273 = 0.8$ $\rightarrow u_3 = 0$
 $\rightarrow r_4 = 0.8 - 0 = 0.8$

•
$$k = 4$$
; $2r_4 = 1.6 \rightarrow d_4 = 1$

$$r_1 = 4$$
, $2r_4 = 1.0$ $\Rightarrow a_4 = 1$ $\Rightarrow r_5 = 1.6 - 1 = 0.6$

•
$$k = 5$$
; $2r_5 = 1.2$

$$r = 0.6 = (0.d_1d_2...d_i...)_2$$

•
$$k = 1$$
; $2r_1 = 1.2 \rightarrow d_1 = 1$
 $\rightarrow r_2 = 1.2 - 1 = 0.2$

•
$$k = 2$$
; $2r_2 = 0.4 \rightarrow d_2 = 0$
 $\rightarrow r_3 = 0.4 - 0 = 0.4$

•
$$k = 3$$
; $2r_3 = 0.8 \rightarrow \boxed{d_3 = 0}$
 $\rightarrow r_4 = 0.8 - 0 = 0.8$

•
$$k = 4$$
; $2r_4 = 1.6 \rightarrow \boxed{d_4 = 1}$
 $\rightarrow r_5 = 1.6 - 1 = 0.6$

•
$$k = 5$$
; $2r_5 = 1.2 \rightarrow d_5 = 1$

$$r = 0.6 = (0.d_1d_2...d_i...)_2$$

•
$$k = 1$$
; $2r_1 = 1.2 \rightarrow d_1 = 1$
 $\rightarrow r_2 = 1.2 - 1 = 0.2$

•
$$k = 2$$
; $2r_2 = 0.4 \rightarrow d_2 = 0$

$$\rightarrow r_3 = 0.4 - 0 = 0.4$$

•
$$k = 3$$
; $2r_3 = 0.8 \rightarrow d_3 = 0$
 $\rightarrow r_4 = 0.8 - 0 = 0.8$

•
$$k = 4$$
; $2r_4 = 1.6 \rightarrow \boxed{d_4 = 1}$

$$\rightarrow r_5 = 1.6 - 1 = 0.6$$

•
$$k = 5$$
; $2r_5 = 1.2 \rightarrow d_5 = 1$

$$\rightarrow r_6 = 1.2 - 1 = \boxed{0.2}$$

$$r = 0.6 = (0.d_1d_2...d_j...)_2$$

•
$$k = 1$$
; $2r_1 = 1.2 \rightarrow d_1 = 1$
 $\rightarrow r_2 = 1.2 - 1 = 0.2$

•
$$k = 2$$
; $2r_2 = 0.4 \rightarrow d_2 = 0$

$$\rightarrow r_3 = 0.4 - 0 = 0.4$$

•
$$k = 3$$
; $2r_3 = 0.8 \rightarrow d_3 = 0$
 $\rightarrow r_4 = 0.8 - 0 = 0.8$

•
$$k = 4$$
; $2r_4 = 1.6 \rightarrow d_4 = 1$

$$\to r_5 = 1.6 - 1 = 0.6$$

•
$$k = 5$$
; $2r_5 = 1.2 \rightarrow d_5 = 1$

$$\rightarrow r_6 = 1.2 - 1 = 0.2$$

$$r = 0.6 = (0.1001100110011...)_2 = (0.1\overline{0011})_2$$

$$r = 0.6 = (0.d_1d_2...d_j...)_2$$
• $k = 1$; $2r_1 = 1.2 \rightarrow d_1 = 1$

$$\rightarrow r_2 = 1.2 - 1 = 0.2$$
• $k = 2$; $2r_2 = 0.4 \rightarrow d_2 = 0$

$$\rightarrow r_3 = 0.4 - 0 = 0.4$$
• $k = 3$; $2r_3 = 0.8 \rightarrow d_3 = 0$

$$\rightarrow r_4 = 0.8 - 0 = 0.8$$
• $k = 4$; $2r_4 = 1.6 \rightarrow d_4 = 1$

$$\rightarrow r_5 = 1.6 - 1 = 0.6$$
• $k = 5$; $2r_5 = 1.2 \rightarrow d_5 = 1$

$$\rightarrow r_6 = 1.2 - 1 = 0.2$$

$$r = 0.6 = (0.1001100110011...)_2 = (0.1\overline{0011})_2$$

$$\therefore 2324, 6 = 2324 + 0.6 = 100100010100_{(2)} + 0.1\overline{0011}_{(2)} = 100100010100.1\overline{0011}_{(2)}$$

| b) $3475.52 = 3475 + 0.52 \rightarrow N = 3475$ | y | r = 0.52 |
|---|---|----------|
|---|---|----------|

| k | |
|-------|--|
| N_k | |
| a_k | |

| b) $3475.52 = 3475 + 0.52 \rightarrow N = 3475$ | y | r = 0.52 |
|---|---|----------|
|---|---|----------|

| k | |
|-------|--|
| N_k | |
| a_k | |

| b) $3475.52 = 3475 + 0.52 \rightarrow N = 3475$ | y | r = 0.52 |
|---|---|----------|
|---|---|----------|

| k | |
|-------|--|
| N_k | |
| a_k | |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| k | 0 |
|-------|---|
| N_k | |
| a_k | |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| k | 0 |
|-------|-----|
| N_k | 475 |
| a_k | |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| k | 0 |
|-------|------|
| N_k | 3475 |
| a_k | 1 |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| k | 0 | 1 | | | | | |
|-------|------|---|--|--|--|--|--|
| N_k | 3475 | | | | | | |
| a_k | 1 | | | | | | |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| k | 0 | 1 | | | | | | | |
|------------------|------|------|--|--|--|--|--|--|--|
| $\overline{N_k}$ | 3475 | 1737 | | | | | | | |
| $\overline{a_k}$ | 1 | | | | | | | | |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| i | k | 0 | 1 | | | | | | | | | | | | | | | |
|----------------|-----------|------|------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| \overline{N} | V_k | 3475 | 1737 | 7 | | | | | | | | | | | | | | |
| a | ι_k | 1 | 1 | | | | | | | | | | | | | | | |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| k | 0 | 1 | 2 | | | | |
|------------------|------|------|---|--|--|--|--|
| $\overline{N_k}$ | 3475 | 1737 | | | | | |
| $\overline{a_k}$ | 1 | 1 | | | | | |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| k | 0 | 1 | 2 |
|-------|------|------|-----|
| N_k | 3475 | 1737 | 868 |
| a_k | 1 | 1 | |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| k | 0 | 1 | 2 | 3 |
|------------------|------|------|-----|---|
| $\overline{N_k}$ | 3475 | 1737 | 868 | |
| $\overline{a_k}$ | 1 | 1 | 0 | |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| k | 0 | 1 | 2 | 3 |
|------------------|------|------|-----|-----|
| $\overline{N_k}$ | 3475 | 1737 | 868 | 434 |
| $\overline{a_k}$ | 1 | 1 | 0 | |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| k | 0 | 1 | 2 | 3 |
|------------------|------|------|-----|-----|
| $\overline{N_k}$ | 3475 | 1737 | 868 | 434 |
| $\overline{a_k}$ | 1 | 1 | 0 | 0 |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| k | 0 | 1 | 2 | 3 | 4 |
|------------------|------|------|-----|-----|---|
| $\overline{N_k}$ | 3475 | 1737 | 868 | 434 | |
| a_k | 1 | 1 | 0 | 0 | |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| k | 0 | 1 | 2 | 3 | 4 |
|------------------|------|------|-----|-----|-----|
| N_k | 3475 | 1737 | 868 | 434 | 217 |
| $\overline{a_k}$ | 1 | 1 | 0 | 0 | |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| k | 0 | 1 | 2 | 3 | 4 |
|------------------|------|------|-----|-----|-----|
| N_k | 3475 | 1737 | 868 | 434 | 217 |
| $\overline{a_k}$ | 1 | 1 | 0 | 0 | 1 |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| k | 0 | 1 | 2 | 3 | 4 | 5 |
|------------------|------|------|-----|-----|-----|---|
| N_k | 3475 | 1737 | 868 | 434 | 217 | |
| $\overline{a_k}$ | 1 | 1 | 0 | 0 | 1 | |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| k | 0 | 1 | 2 | 3 | 4 | 5 |
|------------------|------|------|-----|-----|-----|-----|
| $\overline{N_k}$ | 3475 | 1737 | 868 | 434 | 217 | 108 |
| $\overline{a_k}$ | 1 | 1 | 0 | 0 | 1 | |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| k | 0 | 1 | 2 | 3 | 4 | 5 |
|------------------|------|------|-----|-----|-----|-----|
| $\overline{N_k}$ | 3475 | 1737 | 868 | 434 | 217 | 108 |
| $\overline{a_k}$ | 1 | 1 | 0 | 0 | 1 | 0 |

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| k | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|-------|------|------|-----|-----|-----|-----|---|
| N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | |
| a_k | 1 | 1 | 0 | 0 | 1 | 0 | |

| k | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|-------|------|------|-----|-----|-----|-----|----|
| N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 |
| a_k | 1 | 1 | 0 | 0 | 1 | 0 | |

| k | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|-------|------|------|-----|-----|-----|-----|----|
| N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 |
| a_k | 1 | 1 | 0 | 0 | 1 | 0 | 0 |

| k | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | |
|------------------|------|------|-----|-----|-----|-----|----|---|--|--|
| N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | | | |
| $\overline{a_k}$ | 1 | 1 | 0 | 0 | 1 | 0 | 0 | | | |

| k | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-------|------|------|-----|-----|-----|-----|----|----|
| N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | 27 |
| a_k | 1 | 1 | 0 | 0 | 1 | 0 | 0 | |

| k | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-------|------|------|-----|-----|-----|-----|----|----|
| N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | 27 |
| a_k | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |

| _ | | 0 | | | | | | | | 8 | |
|---|-------|------|------|-----|-----|-----|-----|----|----|---|--|
| | N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | 27 | | |
| | a_k | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | | |

| k | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-------|------|------|-----|-----|-----|-----|----|----|----|
| N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | 27 | 13 |
| a.i. | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | |

| k | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------------------|------|------|-----|-----|-----|-----|----|----|----|
| $\overline{N_k}$ | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | 27 | 13 |
| a.i. | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |

| k | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
|-------|------|------|-----|-----|-----|-----|----|----|----|---|--|
| N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | 27 | 13 | | |
| a.i. | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | | |

| | 0 | | | | | | | | | | |
|-------|------|------|-----|-----|-----|-----|----|----|----|---|--|
| N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | 27 | 13 | 6 | |
| a.i. | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | | |

| k | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-------|------|------|-----|-----|-----|-----|----|----|----|---|
| N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | 27 | 13 | 6 |
| a.i. | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |

| | 0 | | | - | | - | - | | - | - | 10 | |
|----------------|------|------|-----|-----|-----|-----|----|----|----|---|----|--|
| \overline{N} | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | 27 | 13 | 6 | | |
| a_{i} | . 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | | |

| | 0 | | | _ | | - | - | | - | - | - | |
|--------------|------|------|-----|-----|-----|-----|----|----|----|---|---|--|
| N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | 27 | 13 | 6 | 3 | |
| <i>a</i> .ı. | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | | |

| k | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|---------|------|------|-----|-----|-----|-----|----|----|----|---|----|--|
| N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | 27 | 13 | 6 | 3 | |
| a_{l} | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | |

| | 0 | | | - | | - | - | | - | - | - | |
|-------|------|------|-----|-----|-----|-----|----|----|----|---|---|--|
| N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | 27 | 13 | 6 | 3 | |
| a_k | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | |

| | 0 | | | | | | | | | | | |
|------------------|------|------|-----|-----|-----|-----|----|----|----|---|---|---|
| N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | 27 | 13 | 6 | 3 | 1 |
| $\overline{a_k}$ | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | |

| | 0 | | | | | | | | | | | |
|-------|------|------|-----|-----|-----|-----|----|----|----|---|---|---|
| N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | 27 | 13 | 6 | 3 | 1 |
| a_k | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |

| | 0 | | | | | | | | | | | |
|-------|------|------|-----|-----|-----|-----|----|----|----|---|---|--------------|
| N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | 27 | 13 | 6 | 3 | 1 |
| a_k | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| | | | | | | | | | | | | \leftarrow |

$$N=3475=110110010011_{(2)} \\$$

| | | 0 | | | | | | | | | | | |
|---|-------|------|------|-----|-----|-----|-----|----|----|----|---|---|---|
| _ | N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | 27 | 13 | 6 | 3 | 1 |
| | a_k | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| | | | | | | | | | | | | | , |

$$N=3475=110110010011_{(2)} \\$$

$$Para \ r=0.52$$

b)
$$3475.52 = 3475 + 0.52 \rightarrow N = 3475 \ y \ r = 0.52$$

| | 0 | | | | | | | | | | | |
|-------|------|------|-----|-----|-----|-----|----|----|----|---|---|--------------|
| N_k | 3475 | 1737 | 868 | 434 | 217 | 108 | 54 | 27 | 13 | 6 | 3 | 1 |
| a_k | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| | | | | | | | | | | | | \leftarrow |

$$N = 3475 = 110110010011_{(2)}$$

Para r = 0.52

•
$$k = 1$$
; $2r_1 = 1.04 \rightarrow d_1 = 1 \land r_2 = 0.04$
 $k = 2$; $2r_2 = 0.08 \rightarrow d_2 = 0 \land r_3 = 0.08$
 $k = 3$; $2r_3 = 0.16 \rightarrow d_3 = 0 \land r_4 = 0.16$
 $k = 4$; $2r_4 = 0.32 \rightarrow d_4 = 0 \land r_5 = 0.32$
 $k = 5$; $2r_5 = 0.64 \rightarrow d_5 = 0 \land r_6 = 0.64$
 $k = 6$; $2r_6 = 1.28 \rightarrow d_6 = 1 \land r_7 = 0.28$

$$\begin{array}{c} \bullet \ k=7 \ ; \ 2r_7=0.56 \ \rightarrow \ \boxed{d_7=0} \ \land r_8=0.56 \\ k=8 \ ; \ 2r_8=1.12 \ \rightarrow \ \boxed{d_8=1} \ \land r_9=0.12 \\ k=9 \ ; \ 2r_9=0.24 \ \rightarrow \ \boxed{d_9=0} \ \land r_{10}=0.24 \\ k=10 \ ; \ 2r_{10}=0.48 \ \rightarrow \ \boxed{d_{10}=0} \ \land r_{11}=0.48 \\ k=11 \ ; \ 2r_{11}=0.96 \ \rightarrow \ \boxed{d_{11}=0} \ \land r_{12}=0.96 \\ k=12 \ ; \ 2r_{12}=1.92 \ \rightarrow \ \boxed{d_{12}=1} \ \land r_{13}=0.92 \\ k=13 \ ; \ 2r_{13}=1.84 \ \rightarrow \ \boxed{d_{13}=1} \ \land r_{14}=0.84 \\ k=14 \ ; \ 2r_{14}=1.68 \ \rightarrow \ \boxed{d_{14}=1} \ \land r_{15}=0.68 \\ k=15 \ ; \ 2r_{15}=1.36 \ \rightarrow \ \boxed{d_{15}=1} \ \land r_{16}=0.36 \\ k=16 \ ; \ 2r_{16}=0.72 \ \rightarrow \ \boxed{d_{16}=0} \ \land r_{17}=0.72 \\ k=17 \ ; \ 2r_{17}=1.44 \ \rightarrow \ \boxed{d_{17}=1} \ \land r_{18}=0.44 \\ k=18 \ ; \ 2r_{19}=1.76 \ \rightarrow \ \boxed{d_{19}=1} \ \land r_{20}=0.76 \\ k=20 \ ; \ 2r_{20}=1.52 \ \rightarrow \ \boxed{d_{20}=1} \ \land r_{21}=0.52 \\ k=21 \ ; \ 2r_{21}=1.04 \ \rightarrow \ \boxed{d_{21}=1} \ \land r_{22}=0.04 \\ \end{array}$$

$$\begin{split} r = 0.52 &= (0.10000101000111101011100001....)_2 = (0.1\overline{00001010001111010111})_2 \\ &\therefore 3475.52 = 3475 + 0.52 = 110110010011_{(2)} + 0.1\overline{00001010001111010111}_{(2)} \\ &= 110110010011.1\overline{00001010001111010111}_{(2)} \end{split}$$