Hand-in problems 7 for TSTE18 Digital Arithmetic

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The solutions to the hand-in problems should be submitted at most one week after the corresponding seminar to result in prioritized corrections.

These problems should be solved on an **individual** basis. Each student has a consecutive number assigned during the first seminar (or through email contact with the examiner) and should solve the problems using the corresponding data.

Note that the problems should be solved **"by hand"**. Hence, you will need to provide some evidence that you actually solved the problem and not just ran some software for it.

On each sheet of paper write name, personal id number, and student-id, as well as the consecutive number assigned to you.

1 Division using approximated reciprocals

Perform a radix-64 division based on approximated reciprocals of the following numbers (shown in radix-64) resulting in three quotient digits and a remainder

Student no.	Dividend	Divisor
1	13 0 34	38 14 21
2	3 47 47	49 21 52
3	17 60 56	43 34 22
4	19 50 47	36 52 2
5	13 46 49	43 47 56
6	8 8 14	43 18 58
7	2 37 10	58 11 32
8	31 22 3	39 25 21
9	7 59 43	62 28 59
10	0 38 50	39 59 48
11	26 36 50	42 14 20
12	18 52 18	44 54 39
13	31 13 52	53 16 30
14	12 38 50	35 52 53
15	11 27 36	54 47 48
16	12 27 60	50 54 17
17	19 37 61	35 32 33
18	3 57 56	46 49 9
19	19 16 28	58 12 19
20	15 21 50	63 10 15

2 Square-root computation

Perform a radix-2 SRT square-root computation of the following number resulting in an eight bit root and a remainder

Student no.	Radicand
1	243/256
2	254/256
3	211/256
4	143/256
5	134/256
6	207/256
7	200/256
8	250/256
9	223/256
10	212/256
11	195/256
12	162/256
13	250/256
14	197/256
15	133/256
16	217/256
17	194/256
18	136/256
19	241/256
20	171/256