

Daily flash 7 August.

P-1 count of digits.

consider num = 1345, count = 0.

(initialization) num	(condition) num != 0	(inc/dec) count++, num = num/10
1345	1345 != 0 ✓	1 num = 134
134	134 != 0 ✓	2 num = 13
13	13 != 0 ✓	3 num = 1
1	1 != 0 ✓	4 num = 0
0	0 != 0 ✗ break	

count is 4

P-2 Addition of even digit and mult of odd digits.

consider num = 8976.

sum = 0, mult = 1

num	num != 0	rem = num % 10	if (rem % 2 == 0)	else	sum	mult	num / 10
8976	8976 != 0 ✓	= 8976 % 10 = 6	6 % 2 == 0 ✓		6	1	897
897	897 != 0 ✓	= 897 % 10 = 7	7 % 2 == 0 ✗	x		7	89
89	89 != 0 ✓	= 89 % 10 = 9	9 % 2 == 0 ✗	x		63	8
8	8 != 0 ✓	= 8 % 10 = 8	8 % 2 == 0 ✓		14	x	0
0	0 != 0 ✗ (break)						

∴
 sum = 14
 mult = 63

p-3) Divisibility by 7 & 32 & if 6 also then break.

track 0 · num 1

num	track	track != 10	num % 7 & 32 == 0	num % 6 == 0 (break)	else(sop (num),	num++
1	0	0 != 10	1 % 7 == 0 X	1 % 6 == 0 X	X	2
2	0	0 != 10	2 % 7 == 0 X	X	X	3
3	0	0 != 10	3 % 7 == 0 X	X	X	4
4	0	0 != 10	4 % 7 == 0 X	X	X	5

(upto 224 which is first number divisible by 7 & 32)

224	0	0 != 10	224 % 7 == 0 ✓ & 4 224 % 32 == 0 ✓	224 % 6 == 0 X	224	225
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(After that 448)

448	0	0 != 10	448 % 7 == 0 & 8 ✓ 448 % 32 == 0 ✓	X	448	449
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672	2	2 != 10	672 % 7 == 0 & 8 ✓ 672 % 32 == 0 ✓	672 % 6 == 0 ✓ ↓ break the loop
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Output is 224
672

p-4) maximum number.

consider $num = 4532, max = 0$.

num	$num \neq 0$	max	$rem = num / 10$	$if (rem > max)$ $max = rem$	$num /= 10$
4532	$4532 \neq 0 \checkmark$	0	$rem = 4532 / 10$ $= 2$	$2 > 0 \checkmark$	453
453	$453 \neq 0 \checkmark$	3	$rem = 3$	$3 > 2 \checkmark$	45
45	$45 \neq 0 \checkmark$	5	$rem = 5$	$5 > 3 \checkmark$	4
4	$4 \neq 0 \checkmark$	5	$rem = 4$	$4 > 5 \times$	0
0	$0 \neq 0 \times \downarrow$	break.			

output: $max = 5$

p-5) average of all digits. :- First calculate sum.
 $num = 5632$.

num	$num \neq 0$	$rem = num / 10$	$sum += rem$	count++	$num /= 10$
5632	$5632 \neq 0 \checkmark$	2	2	1	563
563	$563 \neq 0 \checkmark$	3	5	2	56
56	$56 \neq 0 \checkmark$	6	11	3	5
5	$5 \neq 0$	5	16	4	0
0	$0 \neq 0 \times \downarrow$	break.			

$$avg = sum / count = 16 / 4 = 4.0$$