# Mandatory Part 1

Testcase 1

Hello, when were you born?

2018

I can relate to that Starting from 1900!

Input exam grade one:

90

Input exam grade two:

90

Input exam grade three:

90

Grade exam: 90

Grade exam: 90

Grade exam: 90

Average: 90

Opinion: Great

Passed

Testcase 2

Hello, when were you born?

1900

I can relate to that Starting from 1900!

Input exam grade one:

50

Input exam grade two:

60

Input exam grade three:

70

Grade exam: 50

Grade exam: 60

Grade exam: 70

Average: 60

Opinion: No

Failed

Testcase 3

Hello, when were you born?

1899

That's early, before the 1900s!

Input exam grade one:

70

Input exam grade two:

80

Input exam grade three:

90

Grade exam: 70

Grade exam: 80

Grade exam: 90

Average: 80

Opinion: Good!

Passed

Testcase 4

Hello, when were you born?

2023

That's the future!

Input exam grade one:

30

Input exam grade two:

40

Input exam grade three:

50

Grade exam: 30

Grade exam: 40

Grade exam: 50

Average: 40

Opinion: No

Failed

# Mandatory Part 2

Testcase 1

version

calculator version 0.1

version

calculator version 0.1

version

calculator version 0.1

version

calculator version 0.1

version

calculator version 0.1

help

supported functions:

"sub" arity: 2

"sum" arity: 2

"divide" arity: 2

"multiply" arity: 2

"power" arity: 2

"sqrt" arity: 1

"mod" arity: 2

"gcd" arity: 2

"lcm" arity: 2

"bin" arity: 1

quit

# Mandatory Part 3

Testcase 1

power 2 5

1

divide 25 5

0

multiply 25 5

0

sub 2 2

0

sqrt 25

0

quit

Testcase 2

power 2

invalid number of operands

sum 1

invalid number of operands

power 2

invalid number of operands

pow

unknown token

sim 3

unknown token

quit

# Mandatory Part 4

Testcase 1

sum 1243 6624

7867

sum 1813 6579

8392

sum 5575 5852

11427

sum 2970 5300

8270

sum 9472 4299

13771

sum 2117 9971

12088

sum 7366 6042

13408

sum 4179 3388

7567

sum 3675 2588

6263

sum 5184 4609

9793

sub 8726 9361

-635

sub 2862 3939

-1077

sub 2053 6883

-4830

sub 3099 8300

-5201

sub 3779 973

2806

sub 5058 3761

1297

sub 416 5525

-5109

sub 978 9662

-8684

sub 896 8838

-7942

sub 4597 9495

-4898

multiply 85 51

4335

multiply 52 69

3588

multiply 38 24

912

multiply 29 66

1914

multiply 39 79

3081

multiply 50 48

2400

multiply 71 48

3408

multiply 40 69

2760

multiply 92 98

9016

multiply 52 88

4576

divide 11 21

0

divide 91 100

0

divide 16 15

1

divide 2 21

0

divide 43 10

4

divide 36 40

0

divide 53 25

2

divide 22 68

0

divide 96 2

48

divide 7 94

0

quit

Testcase 2

sum 91295941 14959219

106255160

sum 91295941 365

91296306

sum 2945 3645

6590

sum 9314 9635

18949

sum 1753 152

1905

sum 6836 7446

14282

sum 3810 2467

6277

sum 1243 1064

2307

sum 4352 8303

12655

sum 8649 2435

11084

sum 3834 4054

7888

sub 4495 3402

1093

sub 6653 4554

2099

sub 9691 6150

3541

sub 182 9264

-9082

sub 9303 51

9252

sub 6876 4748

2128

sub 2226 7468

-5242

sub 9300 4470

4830

sub 98 5550

-5452

sub 6688 2073

4615

multiply 34 43

1462

multiply 27 73

1971

multiply 9 55

495

multiply 77 63

4851

multiply 4 90

360

multiply 34 5

170

multiply 34 15

510

multiply 8 5

40

multiply 31 4

124

multiply 82 79

6478

divide 29 54

0

divide 86 71

1

divide 60 80

0

divide 56 49

1

divide 53 96

0

divide 71 50

1

divide 95 51

1

divide 26 37

0

divide 37 43

0

divide 82 9

9

quit

# Mandatory Part 5

Testcase 1

gcd 37 42

1

gcd 38 97

1

gcd 62 15

1

gcd 58 30

2

gcd 16 4

4

gcd 59 41

1

gcd 31 57

1

gcd 58 62

2

gcd 33 95

1

gcd 51 79

1

lcm 97 45

4365

lcm 60 67

4020

lcm 91 60

5460

lcm 23 100

2300

lcm 42 31

1302

lcm 9 97

873

lcm 38 74

1406

lcm 61 73

4453

lcm 58 82

2378

lcm 90 95

1710

power 3 1

3

power 3 4

81

power 5 2

25

power 4 5

1024

power 3 2

9

power 5 4

625

power 1 1

1

power 4 1

4

power 3 5

243

power 4 2

16

sqrt 9

3

sqrt 87

9

sqrt 13

3

sqrt 96

9

sqrt 75

8

sqrt 28

5

sqrt 60

7

sqrt 83

9

sqrt 10

3

sqrt 90

9

mod 53 21

11

mod 20 73

20

mod 33 21

12

mod 78 38

2

mod 6 40

6

mod 95 96

95

mod 20 19

1

mod 35 73

35

mod 90 67

23

mod 95 29

8

quit

Testcase 2

gcd 79 6

1

gcd 66 79

1

gcd 3 52

1

gcd 23 96

1

gcd 59 33

1

gcd 10 55

5

gcd 62 56

2

gcd 73 82

1

gcd 25 98

1

gcd 70 45

5

lcm 50 61

3050

lcm 25 46

1150

lcm 52 100

1300

lcm 36 55

1980

lcm 34 13

442

lcm 45 14

630

lcm 49 60

2940

lcm 32 17

544

lcm 77 42

462

lcm 90 65

1170

power 2 3

8

power 2 1

2

power 2 4

16

power 3 5

243

power 3 3

27

power 4 1

4

power 5 3

125

power 5 5

3125

power 1 3

1

power 1 2

1

sqrt 74

8

sqrt 70

8

sqrt 15

3

sqrt 76

8

sqrt 10

3

sqrt 42

6

sqrt 1

1

sqrt 77

8

sqrt 69

8

sqrt 77

8

mod 20 41

20

mod 45 74

45

mod 33 100

33

mod 74 54

20

mod 99 70

29

mod 1 47

1

mod 87 91

87

mod 5 33

5

mod 74 24

2

mod 95 39

17

quit

# Full Calculator excluding advanced requirements

Mandatory Week 2

help

supported functions:

"sub" arity: 2

"sum" arity: 2

"divide" arity: 2

"multiply" arity: 2

"power" arity: 2

"sqrt" arity: 1

"mod" arity: 2

"gcd" arity: 2

"lcm" arity: 2

"bin" arity: 1

version

calculator version 0.1

quit

Mandatory Week 3

power 2

invalid number of operands

sum 1

invalid number of operands

power 2

invalid number of operands

pow

unknown token

sim 3

unknown token

quit

Mandatory Week 4.1

sub 222 271

-49

sub 641 757

-116

sub 283 991

-708

sub 358 959

-601

sub 190 168

22

sub 286 826

-540

sub 818 31

787

sub 367 551

-184

sub 455 122

333

sub 84 220

-136

sum 93 382

475

sum 148 776

924

sum 994 20

1014

sum 370 117

487

sum 159 207

366

sum 422 159

581

sum 957 953

1910

sum 674 345

1019

sum 74 138

212

sum 183 577

760

multiply 68 17

1156

multiply 71 76

5396

multiply 41 67

2747

multiply 14 48

672

multiply 57 24

1368

multiply 11 21

231

multiply 59 66

3894

multiply 29 46

1334

multiply 70 82

5740

multiply 31 43

1333

divide 32 135

0

divide 117 195

0

divide 38 230

0

divide 174 162

1

divide 152 227

0

divide 168 57

2

divide 61 215

0

divide 123 52

2

divide 60 196

0

divide 102 178

0

quit

Mandatory Week 4.2

sub 166 43

123

sub 23 730

-707

sub 86 850

-764

sub 525 827

-302

sub 39 945

-906

sub 56 667

-611

sub 325 80

245

sub 78 415

-337

sub 145 59

86

sub 617 530

87

sum 461 857

1318

sum 377 974

1351

sum 296 509

805

sum 580 730

1310

sum 734 27

761

sum 17 888

905

sum 733 0

733

sum 865 913

1778

sum 698 296

994

sum 470 893

1363

multiply 37 16

592

multiply 75 24

1800

multiply 25 30

750

multiply 51 28

1428

multiply 44 59

2596

multiply 77 66

5082

multiply 8 7

56

multiply 57 34

1938

multiply 5 85

425

multiply 80 28

2240

divide 179 204

0

divide 0 217

0

divide 183 106

1

divide 69 93

0

divide 212 76

2

divide 50 63

0

divide 193 167

1

divide 204 149

1

divide 221 156

1

divide 187 125

1

quit

Mandatory Week 5.1

power 4 4

256

power 1 2

1

power 4 4

256

power 4 3

64

power 3 4

81

power 2 4

16

power 1 0

1

power 2 3

8

power 4 3

64

power 0 3

0

sqrt 683

26

sqrt 541

23

sqrt 868

29

sqrt 272

16

sqrt 548

23

sqrt 731

27

sqrt 790

28

sqrt 859

29

sqrt 482

21

sqrt 242

15

mod 279 178

101

mod 538 733

538

mod 371 768

371

mod 674 132

14

mod 176 530

176

mod 637 923

637

mod 415 105

100

mod 619 220

179

mod 387 427

387

mod 75 922

75

gcd 674 401

1

gcd 541 684

1

gcd 749 715

1

gcd 340 748

68

gcd 842 745

1

gcd 64 173

1

gcd 771 681

3

gcd 625 814

1

gcd 575 398

1

gcd 889 702

1

lcm 67 4

268

lcm 49 46

2254

lcm 48 28

336

lcm 14 29

406

lcm 19 13

247

lcm 28 5

140

lcm 93 9

279

lcm 5 20

20

lcm 76 31

2356

lcm 81 97

7857

quit

Mandatory Week 5.2

power 4 4

256

power 1 4

1

power 2 3

8

power 2 0

1

power 3 2

9

power 1 4

1

power 2 4

16

power 4 0

1

power 2 0

1

power 4 1

4

sqrt 389

19

sqrt 854

29

sqrt 480

21

sqrt 669

25

sqrt 639

25

sqrt 357

18

sqrt 392

19

sqrt 873

29

sqrt 657

25

sqrt 603

24

mod 729 270

189

mod 779 865

779

mod 15 891

15

mod 792 148

52

mod 950 483

467

mod 88 857

88

mod 383 933

383

mod 371 720

371

mod 310 679

310

mod 374 763

374

gcd 303 864

3

gcd 705 154

1

gcd 674 34

2

gcd 901 935

17

gcd 407 63

1

gcd 941 783

1

gcd 991 739

1

gcd 853 885

1

gcd 871 304

1

gcd 664 637

1

lcm 87 94

8178

lcm 98 24

1176

lcm 46 55

2530

lcm 11 86

946

lcm 45 65

585

lcm 24 2

24

lcm 1 53

53

lcm 61 83

5063

lcm 5 71

355

lcm 54 29

1566

quit

# Advanced requirements

Advanced Ans

power 2 4

16

sum ans 1

17

sub ans 1

16

divide ans 4

4

divide 8 ans

2

power ans 4

16

sqrt ans

4

sub ans 4

0

quit

Advanced Binary to Decimal Conversion

bin 1100011

99

bin 10111011

187

bin 100100000110

2310

bin 11010101010

1706

bin 0101101011

363

bin 0101010101

341

bin 101010101111

2735

bin 1111111111

1023

bin 11100111011101110010111

7584663

quit

Advanced Infix

2 power 7 sum 0 mod 1 divide 2 power 4

128

3 sum 1 multiply 1 mod 7 multiply 5 sum 3

11

7 multiply 6 multiply 6 sub 9 sum 2 multiply 7

257

9 multiply 0 sub 8 mod 8 divide 3 mod 7

0

9 power 2 sum 4 power 4 mod 4 power 5

337

3 mod 1 divide 9 sub 8 power 1 power 2

-8

0 sub 1 mod 9 power 1 power 1 power 0

-1

5 divide 6 sum 6 sum 0 sub 0 divide 8

6

5 sum 0 power 9 multiply 9 divide 6 sum 9

14

1 mod 7 sub 6 multiply 8 multiply 7 multiply 5

-1679

2 mod 9 sub 0 multiply 5 multiply 0 sub 0

2

5 multiply 6 mod 6 divide 9 mod 5 sum 8

8

2 multiply 6 sub 6 mod 1 power 0 mod 8

12

1 mod 2 mod 2 sum 0 sub 8 multiply 6

-47

7 sub 9 multiply 5 power 4 divide 5 sum 5

-1113

quit

Advanced Postfix 1

286 305 sub

-19

596 189 sub

407

319 947 sub

-628

667 451 sub

216

924 733 sub

191

497 633 sub

-136

153 945 sub

-792

488 707 sub

-219

478 484 sub

-6

461 707 sub

-246

585 984 sum

1569

119 850 sum

969

160 538 sum

698

23 408 sum

431

916 185 sum

1101

754 808 sum

1562

824 416 sum

1240

402 180 sum

582

612 208 sum

820

38 286 sum

324

80 10 multiply

800

80 12 multiply

960

84 99 multiply

8316

96 32 multiply

3072

66 1 multiply

66

15 81 multiply

1215

47 30 multiply

1410

89 5 multiply

445

29 42 multiply

1218

52 46 multiply

2392

89 20 divide

4

22 209 divide

0

64 102 divide

0

150 46 divide

3

104 89 divide

1

136 62 divide

2

42 140 divide

0

217 243 divide

0

120 230 divide

0

29 168 divide

0

quit

Advanced Postfix 2

575 125 sub

450

382 897 sub

-515

125 577 sub

-452

154 941 sub

-787

854 734 sub

120

125 140 sub

-15

802 265 sub

537

990 397 sub

593

825 578 sub

247

935 732 sub

203

896 985 sum

1881

298 653 sum

951

609 380 sum

989

371 536 sum

907

314 15 sum

329

784 448 sum

1232

840 321 sum

1161

175 252 sum

427

401 485 sum

886

750 200 sum

950

94 21 multiply

1974

36 97 multiply

3492

75 35 multiply

2625

97 81 multiply

7857

38 30 multiply

1140

54 16 multiply

864

74 36 multiply

2664

34 71 multiply

2414

54 96 multiply

5184

79 71 multiply

5609

62 175 divide

0

124 210 divide

0

225 77 divide

2

35 222 divide

0

227 147 divide

1

131 30 divide

4

241 61 divide

3

153 174 divide

0

120 110 divide

1

223 117 divide

1

quit