

Soroban Technology Lab

2 Kyu Multiplication (7 min)

No.		Name	
Date		Score	

(Note) Round to 3 decimal places

1	$0.716 \times 0.71604 =$
2	$4,308 \times 3,656 =$
3	$28.35 \times 1.273 =$
4	$50.149 \times 0.025 =$
5	$6,943 \times 9,197 =$
6	$7,621 \times 3,074 =$
7	$0.09457 \times 425 =$

(Note) Round to the nearest integer

8	$9,762 \times 8.046 =$
9	$2,351 \times 0.9671 =$
10	$698 \times 31,285 =$
11	$4,780 \times 0.0482 =$
12	$8,237 \times 5,307 =$
13	$114 \times 91,368 =$
14	$50,920 \times 298 =$
15	$3,685 \times 645.9 =$

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2 Kyu Division (7 min)

No.		Name	
Date		Score	

(Note) Round to 3 decimal places

1	$5.7686 \div 380.4 =$
2	$2,662,834 \div 934 =$
3	$1,775,832 \div 4,852 =$
4	$587,205 \div 13,049 =$
5	$667.1964 \div 74.1 =$
6	$3,156.504 \div 0.67 =$
7	$0.056823 \div 0.042 =$

(Note) Round to the nearest integer

8	$1,072,302 \div 231 =$
9	$21 \div 0.0923 =$
10	$1,791,214 \div 2,581 =$
11	$38,928 \div 0.64 =$
12	$1,026,818 \div 7,033 =$
13	$356,552 \div 5,093.6 =$
14	$18,379 \div 5.91 =$
15	$507,365 \div 127 =$

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2 Kyu Sums (7 min)

No.		Name	
Date		Score	

1	2	3	4	5
329,046	95,780	40,923	9,752	8,051
8,917	73,641	67,801	3,806	924,715
62,783	4,398	2,143	815,062	-201,698
349,250	1,025	-58,697	9,473	3,572
4,671	82,974	-3,562	73,812	-6,180
9,058	56,031	84,109	506,749	-84,973
65,380	98,415	-25,416	39,124	1,532
2,147	36,720	30,987	6,058	70,964

6	7	8	9	10
8,109	70,138	78,230	415,068	4,302
5,962	6,524	-6,814	37,684	926,145
3,056	1,657	-75,941	5,231	-7,069
97,124	38,290	36,025	78,960	-853,971
241,908	81,675	-17,493	2,375	10,352
625,783	49,302	61,280	9,410	-62,048
3,950	80,571	47,025	3,162	8,156
67,184	29,643	3,986	587,904	4,397

11	12	13	14	15
730,258	67,059	673,510	4,678	6,479
9,105	-52,314	1,738	386,015	80,235
83,274	-1,876	9,820	97,241	59,864
617,539	9,403	305,976	-56,074	71,350
8,051	30,189	7,241	8,632	24,836
29,468	-26,745	8,365	-1,095	10,297
3,054	30,958	97,043	-954,601	7,865
9,217	72,164	85,261	3,278	93,410

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2 Kyu Receipts (7 min)

No.		Name	
Date		Score	

pp. 1-8	(1)	(2)	(3)	(4)	(5)
pp. 9-16	(6)	(7)	(8)	(9)	(10)
pp. 17-24	(11)	(12)	(13)	(14)	(15)

2 Kyu Receipts (7 min)			
(1)	<u>783</u>	(1)	<u>19,836</u>
(2)	<u>60,835</u>	(2)	<u>23,064</u>
(3)	<u>90,836</u>	(3)	<u>4,057</u>
(4)	<u>4,178</u>	(4)	<u>97,562</u>
(5)	<u>23,019</u>	(5)	<u>17,643</u>
(1)	<u>10,352</u>	(1)	<u>19,836</u>
(2)	<u>619</u>	(2)	<u>23,064</u>
(3)	<u>302</u>	(3)	<u>4,057</u>
(4)	<u>954</u>	(4)	<u>97,562</u>
(5)	<u>701</u>	(5)	<u>17,643</u>

2 Kyu Receipts (7 min)

6		4	
(1)	<u>82,605</u>	(1)	<u>74,189</u>
(2)	<u>73,684</u>	(2)	<u>2,457</u>
(3)	<u>95,210</u>	(3)	<u>298</u>
(4)	<u>8,203</u>	(4)	<u>80,431</u>
(5)	<u>910</u>	(5)	<u>20,856</u>
7		5	
(1)	<u>4,793</u>	(1)	<u>5,062</u>
(2)	<u>798</u>	(2)	<u>81,502</u>
(3)	<u>56,378</u>	(3)	<u>1,567</u>
(4)	<u>19,860</u>	(4)	<u>56,027</u>
(5)	<u>4,687</u>	(5)	<u>9,382</u>

9 (1) <u> / 53 </u> (2) <u> 86,34 / </u> (3) <u> 76,384 </u> (4) <u> 9,648 </u> (5) <u> 538 </u>	8 (1) <u> 840 </u> (2) <u> 8,970 </u> (3) <u> 69,72 / </u> (4) <u> 976 </u> (5) <u> 47,568 </u>
10 (1) <u> 407 </u> (2) <u> 9,850 </u> (3) <u> / 90 </u> (4) <u> 43,290 </u> (5) <u> 67,084 </u>	The next pages are questions (6)–(10).

2 Kyu Receipts (7 min)

13		11	
(1)	<u>5,834</u>	(1)	<u>10,872</u>
(2)	<u>17,064</u>	(2)	<u>85,672</u>
(3)	<u>901</u>	(3)	<u>3,074</u>
(4)	<u>3,275</u>	(4)	<u>70,439</u>
(5)	<u>12,950</u>	(5)	<u>506</u>
14		12	
(1)	<u>93,657</u>	(1)	<u>48,596</u>
(2)	<u>70,189</u>	(2)	<u>527</u>
(3)	<u>32,165</u>	(3)	<u>15,687</u>
(4)	<u>71,862</u>	(4)	<u>36,058</u>
(5)	<u>20,194</u>	(5)	<u>3,769</u>

The next pages are questions (11)–(15).	15	(1) <u>7,028</u>
		(2) <u>354</u>
		(3) <u>9,526</u>
		(4) <u>105</u>
		(5) <u>1,476</u>
	16	(1) <u>96,240</u>
		(2) <u>2,603</u>
		(3) <u>20,179</u>
		(4) <u>546</u>
		(5) <u>24,891</u>
	17	(1) <u>5,604</u>
		(2) <u>14,972</u>
		(3) <u>30,276</u>
		(4) <u>160</u>
		(5) <u>4/9</u>

2 Kyu Receipts (7 min)

20		18	
(1)	<u>748</u>	(1)	<u>81,976</u>
(2)	<u>6,238</u>	(2)	<u>85,314</u>
(3)	<u>2,601</u>	(3)	<u>47,390</u>
(4)	<u>13,605</u>	(4)	<u>68,471</u>
(5)	<u>63,501</u>	(5)	<u>52,760</u>
21		19	
(1)	<u>19,520</u>	(1)	<u>97,013</u>
(2)	<u>603</u>	(2)	<u>421</u>
(3)	<u>846</u>	(3)	<u>25,847</u>
(4)	<u>9,037</u>	(4)	<u>50,347</u>
(5)	<u>6,812</u>	(5)	<u>70,218</u>

2 Kyu Receipts (7 min)

24		22	
(1)	<u>285</u>	(1)	<u>30,682</u>
(2)	<u>7,019</u>	(2)	<u>76,950</u>
(3)	<u>84,013</u>	(3)	<u>6,415</u>
(4)	<u>89,215</u>	(4)	<u>2,748</u>
(5)	<u>579</u>	(5)	<u>94,038</u>
23			
(1)		(1)	<u>8,416</u>
(2)		(2)	<u>50,186</u>
(3)		(3)	<u>198</u>
(4)		(4)	<u>192</u>
(5)		(5)	<u>2,863</u>

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2 Kyu Mental Calculation (3 min)

No.		Name	
Date		Score	

1	2	3	4	5
58	31	85	15	703
71	92	17	139	-16
27	705	-83	96	87
603	14	429	87	504
58	236	50	403	29
194	89	-167	25	-31

6	7	8	9	10
653	103	91	59	68
10	94	58	417	57
61	28	65	580	972
47	-97	84	-97	601
583	-56	930	26	53
92	130	712	-13	84

11	12	13	14	15
472	158	62	90	425
67	269	10	82	-93
658	76	-67	846	76
34	45	824	715	95
10	30	-315	30	-281
92	18	90	29	40

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2 Kyu Applied Calculation (10 min)

No.		Name	
Date		Score	

- (1) Find the missing number.

$$3,610 \times (179 + 137) = \square$$

Answer

- (9) 152 items were bought with ¥30,000, and the change was ¥7,200. How much was one?

Answer

- (2) Find the missing number.

$$\square \div 400 = 308 \text{ remainder } 291$$

Answer

- (10) An item priced at ¥470,500 was bought with a discount of 32%. How much was paid including consumption tax? The consumption tax rate is 10%.

Answer

- (3) Round each number to two significant figures before calculating. Give the answer to two significant figures as well.

$$72,459 \times 5,981$$

Answer

- (11) How many yen is \$79.16? Take \$1 = ¥124. (Round down to the nearest yen.)

Answer

- (4) Calculate the following. (Round to the nearest yen.)

$$¥1,360 \times \frac{36}{365}$$

Answer

- (12) What is the average of the weights 26.3kg, 31.7kg, 64.5kg, 56.1kg? (Round the kilograms to one decimal place.)

Answer

Fill in the blanks in the table. (The markup rate is the rate on the cost price.)

Cost price (yen)	Markup rate (%)	Profit (yen)	List price (yen)
368,900	35	(5)	
725,400	(6)	130,572	
238,100	38		(7)
(8)	20		128,040

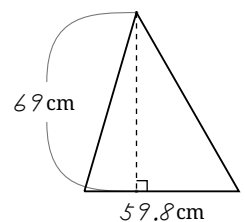
- (13) ¥18,304 was paid including consumption tax. What was the price of this item before tax? The consumption tax rate is 10%.

Answer

- (14) How many dollars is ¥94,000? Take \$1 = ¥87. (Round down to the nearest dollar.)

Answer

- (15) What is the area of the triangle on the right, in cm²?



Answer

Answers 2 Kyu

Multiplication

1	<i>0.513</i>	6	<i>23,426,954</i>	11	<i>230</i>
2	<i>15,750,048</i>	7	<i>40.192</i>	12	<i>43,713,759</i>
3	<i>36.090</i>	8	<i>78,545</i>	13	<i>10,415,952</i>
4	<i>1.254</i>	9	<i>2,274</i>	14	<i>15,174,160</i>
5	<i>63,854,771</i>	10	<i>21,836,930</i>	15	<i>2,380,142</i>

Division

1	<i>0.015</i>	6	<i>4,711.2</i>	11	<i>60,825</i>
2	<i>2,851</i>	7	<i>1.353</i>	12	<i>146</i>
3	<i>366</i>	8	<i>4,642</i>	13	<i>70</i>
4	<i>45</i>	9	<i>228</i>	14	<i>3,110</i>
5	<i>9.004</i>	10	<i>694</i>	15	<i>3,995</i>

Sums

1	<i>831,252</i>	6	<i>1,053,076</i>	11	<i>1,489,966</i>
2	<i>448,984</i>	7	<i>357,800</i>	12	<i>128,838</i>
3	<i>138,288</i>	8	<i>126,298</i>	13	<i>1,188,954</i>
4	<i>1,463,836</i>	9	<i>1,139,794</i>	14	<i>-511,926</i>
5	<i>715,983</i>	10	<i>30,264</i>	15	<i>354,336</i>

Receipts

1	<i>198,460</i>	6	<i>262,787</i>	11	<i>244,244</i>
2	<i>251,929</i>	7	<i>272,600</i>	12	<i>241,703</i>
3	<i>318,369</i>	8	<i>158,106</i>	13	<i>197,586</i>
4	<i>268,191</i>	9	<i>235,223</i>	14	<i>233,775</i>
5	<i>124,766</i>	10	<i>131,408</i>	15	<i>291,190</i>

Mental Calculation

1	<i>1,011</i>	6	<i>1,446</i>	11	<i>1,333</i>
2	<i>1,167</i>	7	<i>202</i>	12	<i>596</i>
3	<i>331</i>	8	<i>1,940</i>	13	<i>604</i>
4	<i>765</i>	9	<i>972</i>	14	<i>1,792</i>
5	<i>1,276</i>	10	<i>1,835</i>	15	<i>262</i>

Applied Calculation

1	<i>1,140,760</i>	6	<i>18</i>	11	<i>¥9,815</i>
2	<i>123,491</i>	7	<i>328,578</i>	12	<i>44.7kg</i>
3	<i>430,000,000</i>	8	<i>106,700</i>	13	<i>¥16,640</i>
4	<i>¥134</i>	9	<i>¥150</i>	14	<i>\$1,080</i>
5	<i>129,115</i>	10	<i>¥351,934</i>	15	<i>2,063.1 cm²</i>