

Soroban Technology Lab

Dan Multiplication (7 min)

No.		Name	
Date		Score	

(Note) Round to 3 decimal places

1	$4,588 \times 12,564 =$
2	$429,177 \times 0.095 =$
3	$626 \times 0.040199 =$
4	$86,584 \times 0.6223 =$
5	$37,042 \times 8,539 =$
6	$24,711 \times 77.591 =$
7	$0.005766 \times 8,448 =$
8	$519.58 \times 0.00953 =$
9	$7,341 \times 885,933 =$
10	$32,002 \times 44,587 =$
11	$986,822 \times 88,160 =$
12	$680.34 \times 0.004063 =$
13	$6,842 \times 78,587.05 =$
14	$0.062617 \times 92,690 =$
15	$6,149,281 \times 4,946 =$

(Note) Round to the nearest integer

16	$44,582 \times 754,509 =$
17	$280,930 \times 4,760.2 =$
18	$8,283,749 \times 4,258 =$
19	$302.9 \times 1,206,132 =$
20	$2.6036 \times 0.421525 =$
21	$8,432,994 \times 95,011 =$
22	$33,959 \times 49.75125 =$
23	$633,581 \times 916,355 =$
24	$6,852,472 \times 6,962.3 =$
25	$8,648,706 \times 4.2894 =$
26	$46,918 \times 89,843.09 =$
27	$856,185 \times 398,609 =$
28	$40.548 \times 0.2768469 =$
29	$684,401 \times 949,820 =$
30	$614,357 \times 8.41796 =$

Soroban Technology Lab

Dan Division (7 min)

No.		Name	
Date		Score	

(Note) Round to 3 decimal places

1	$21,616.363 \div 4,050 =$
2	$26,061,098 \div 50,311 =$
3	$2,084.9285 \div 260.8 =$
4	$3,225,995.8 \div 81.1 =$
5	$24,523,566 \div 3,781 =$
6	$5,765.6328 \div 38,832.6 =$
7	$386,672.302 \div 4,099 =$
8	$445.464396 \div 0.8541 =$
9	$114,715,815 \div 16,395 =$
10	$237,682,848 \div 416 =$
11	$286,859.2716 \div 41.572 =$
12	$831,827,960 \div 1,592 =$
13	$783,315,437 \div 125,753 =$
14	$3,228,514.543 \div 44,586 =$
15	$8,120.59374 \div 464.63 =$

(Note) Round to the nearest integer

16	$6,387 \div 0.39819 =$
17	$2,393,528,636 \div 5,158 =$
18	$255,955 \div 4.4375 =$
19	$20,486,244 \div 5,850.49 =$
20	$812,238,482 \div 51,349 =$
21	$55,466,866,434 \div 72,667 =$
22	$19,484,353,992 \div 4,317,384 =$
23	$6,874 \div 0.094378 =$
24	$1,672 \div 0.2600369 =$
25	$16,460,753,354 \div 94,814 =$
26	$178,869 \div 3.40625 =$
27	$78,400 \div 0.78125 =$
28	$31,487,800,677 \div 428,353 =$
29	$2,362,320,091 \div 453.4 =$
30	$4,119,578,040 \div 636.7 =$

Soroban Technology Lab

Dan Sums (7 min)

No.		Name	
Date		Score	

1	2	3	4	5	6	7
62,430	542,306	20,768	502,439	603	58,697	3,605
879,021	-280,617	153	58,340	-78,264	405,178	-1,968
4,136	5,391	206,789	960,173	25,079	283,906	4,687
790,284	257	150	832	412,350	8,165	21,340
586,310	893	697,584	4,597	3,796	4,058	254,097
173	-74,106	471,392	6,310	-8,619	1,793	78,156
926	-5,049	528	481	721,035	76,421	59,378
47,215	827,163	3,610	279	784	53,089	-90,462
8,093	925	85,493	53,902	-602,431	49,802	-236,519
564	43,068	7,026	684,751	985	172,563	873,041

8	9	10	11	12	13	14
50,142	1,295	8,742	5,764	6,891,320	5,726	1,809
7,493	90,684	80,531	9,470,652	-1,725,048	50,837	-2,479,013
54,321	48,137	25,149	34,120	8,725	32,065	308,476
6,489	235,906	-786,930	7,842,356	3,106	617,508	69,845
4,970	13,280	2,879	924,801	294,873	4,295,137	8,351,029
583,017	9,674	-35,601	539,076	-80,965	4,062	3,714
870,126	614,758	307,864	8,902,741	7,541	8,397,514	8,265,937
46,239	3,902	-2,195	5,362	1,368,492	168,302	-24,160
27,805	52,163	198,407	67,419	23,508	3,986,275	2,901
431,596	908,547	46,325	8,503	-609,714	9,410	-534,687

15	16	17	18	19	20
7,825,160	6,302,985	679,405	4,376	9,825	60,172,489
7,602	984,312	8,136,297	850,923	5,460,182	-5,628,134
6,349	40,539	5,310	97,012,635	63,072,849	-57,309
2,684,597	6,025,981	-28,546	9,145,286	6,493,027	240,795
1,390,486	76,143	24,871,903	8,374	90,271,548	13,068
2,075	72,491,306	34,812	9,654,031	2,356	-43,167,982
38,612	47,069,852	506,397	20,784	38,412	8,507
109,754	1,538	1,076	786,519	95,607	3,965
71,325	187,293	-2,840,659	30,519,268	817,953	416,258
640,983	5,406	-81,357,924	43,027	261,408	1,032,497

21	22	23	24	25
14,850	6,790,381	4,902	482,031	80,563
759,182,046	-25,403	947,531,026	-72,618,490	6,354
5,064,791	9,078	14,205,897	9,056	956,804,732
784,639,120	71,496	720,463	-635,807,421	81,267,950
13,285	56,942,378	68,254	28,519	12,309
2,347	723,809,516	142,635,809	891,652,734	75,934,860
9,051	1,845	71,904,263	4,370	1,647,283
29,685,704	832,017	3,187	1,467,809	467,510,928
56,140,839	-40,793,625	7,359,014	62,319,785	138,706
731,628	-391,685,204	92,658	-50,342	5,429

26	27	28	29	30
421,750,893	6,029	8,205	653,812,970	6,034
3,408	4,705	9,612	-20,653	46,098,325
65,017,294	-756,921,384	25,803,491	-54,698,372	47,812
508,437	352,106	53,970,628	423,108	4,097
21,378	97,148,362	487,692,510	7,416	856,317,240
963,274,581	-78,390,541	74,385	-576,918,024	249,650,318
19,480,637	59,268	19,240	7,403,956	70,816,593
5,024	-70,685	245,376	32,501	52,638
93,786	1,295,430	169,487,053	9,738	691,745
4,106,952	470,862,193	6,903,128	91,640,285	3,409,827

Soroban Technology Lab

Dan Receipts (7 min)

No.		Name	
Date		Score	

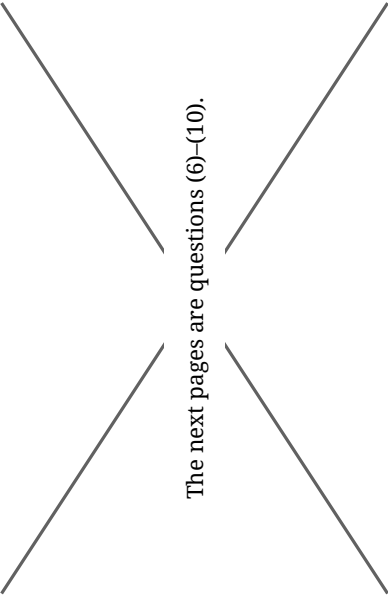
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Dan Receipts (7 min)	
(1) 3,497 (2) 69,328 (3) 709,243 (4) 8,906 (5) 7,839 1 7,512 (2) 8,473 (3) 26,078 (4) 45,317 (5) 30,518	

Dan Receipts (7 min)

6		4	
(1)	<u>674,59 /</u>	(1)	<u>948,253</u>
(2)	<u>9,305</u>	(2)	<u>179,638</u>
(3)	<u>7,320</u>	(3)	<u>19,308</u>
(4)	<u>137,489</u>	(4)	<u>304,259</u>
(5)	<u>6,403</u>	(5)	<u>489,563</u>
7		5	
(1)	<u>38,906</u>	(1)	<u>316,048</u>
(2)	<u>750,621</u>	(2)	<u>508,164</u>
(3)	<u>5,894</u>	(3)	<u>1,296</u>
(4)	<u>945,713</u>	(4)	<u>8,026</u>
(5)	<u>7,562</u>	(5)	<u>18,749</u>

9		8
(6)	<u>31,067</u>	(1) <u>6,580</u>
(7)	<u>47,960</u>	(2) <u>2,013</u>
(8)	<u>318</u>	(3) <u>137,925</u>
(9)	<u>46,875</u>	(4) <u>8,576</u>
(10)	<u>5,093</u>	(5) <u>106,295</u>
10		
(6)	<u>5,916</u>	 The next pages are questions (6)–(10).
(7)	<u>856,014</u>	
(8)	<u>4,659</u>	
(9)	<u>84,956</u>	
(10)	<u>835</u>	

Dan Receipts (7 min)

13		11	
(6)	<u>402</u>	(6)	<u>9,648</u>
(7)	<u>3,849</u>	(7)	<u>30,251</u>
(8)	<u>809</u>	(8)	<u>307,568</u>
(9)	<u>761</u>	(9)	<u>9,674</u>
(10)	<u>368</u>	(10)	<u>32,608</u>
14		12	
(6)	<u>207,135</u>	(6)	<u>386</u>
(7)	<u>67,495</u>	(7)	<u>1,397</u>
(8)	<u>26,738</u>	(8)	<u>72,950</u>
(9)	<u>1,093</u>	(9)	<u>90,528</u>
(10)	<u>260,153</u>	(10)	<u>64,971</u>

Dan Receipts (7 min)

17		15	
(6)	<u>70,392</u>	(6)	<u>28,710</u>
(7)	<u>623</u>	(7)	<u>978</u>
(8)	<u>620,954</u>	(8)	<u>64,573</u>
(9)	<u>8,201</u>	(9)	<u>345,170</u>
(10)	<u>95,817</u>	(10)	<u>902,485</u>
18		16	
(6)	<u>4,528</u>	(6)	<u>481,235</u>
(7)	<u>8,201</u>	(7)	<u>603,842</u>
(8)	<u>1,075</u>	(8)	<u>1,426</u>
(9)	<u>623</u>	(9)	<u>107,623</u>
(10)	<u>7,140</u>	(10)	<u>8,724</u>

20		The next pages are questions (11)–(15).
(11)	<u>5,240</u>	
(12)	<u>748,091</u>	
(13)	<u>50,692</u>	
(14)	<u>7,064,981</u>	
(15)	<u>571</u>	
21		19
(11)	<u>2,893</u>	(11) <u>910,728</u>
(12)	<u>364,259</u>	(12) <u>5,904,837</u>
(13)	<u>5,046</u>	(13) <u>9,743</u>
(14)	<u>7,536</u>	(14) <u>698,153</u>
(15)	<u>36</u>	(15) <u>917,854</u>

Dan Receipts (7 min)

24		22	
(11)	<u>2,064,831</u>	(11)	<u>2,895,467</u>
(12)	<u>952</u>	(12)	<u>3,751,824</u>
(13)	<u>304</u>	(13)	<u>821,465</u>
(14)	<u>918</u>	(14)	<u>8,270,143</u>
(15)	<u>9,387,420</u>	(15)	<u>26,903</u>
25		23	
(11)	<u>873,419</u>	(11)	<u>659</u>
(12)	<u>680</u>	(12)	<u>70,386</u>
(13)	<u>859</u>	(13)	<u>5,164,927</u>
(14)	<u>69,584</u>	(14)	<u>412,075</u>
(15)	<u>1,548</u>	(15)	<u>6,048,712</u>

28		26	
(11)	<u>763</u>	(11)	<u>57,604</u>
(12)	<u>6,153</u>	(12)	<u>1,926</u>
(13)	<u>18,347</u>	(13)	<u>924,780</u>
(14)	<u>702</u>	(14)	<u>5,620</u>
(15)	<u>5,068</u>	(15)	<u>879,362</u>
The next pages are questions (16)–(20).		27	
		(11)	<u>18,035</u>
		(12)	<u>42,301</u>
		(13)	<u>1,307,628</u>
		(14)	<u>73,294</u>
		(15)	<u>50,234</u>

Dan Receipts (7 min)

31		29	
(16)	<u>826,390</u>	(16)	<u>9,045</u>
(17)	<u>8,241</u>	(17)	<u>3,651,094</u>
(18)	<u>726,508</u>	(18)	<u>5,406,821</u>
(19)	<u>6,095,381</u>	(19)	<u>8,134,602</u>
(20)	<u>3,024,671</u>	(20)	<u>907,543</u>
32		30	
(16)	<u>5,703</u>	(16)	<u>8,153</u>
(17)	<u>8,071,394</u>	(17)	<u>17,563</u>
(18)	<u>839,720</u>	(18)	<u>4,085,163</u>
(19)	<u>7,496</u>	(19)	<u>9,641,235</u>
(20)	<u>3,158</u>	(20)	<u>6,872,319</u>

Dan Receipts (7 min)

35		33	
(16)	<u>3,024,956</u>	(16)	<u>21,879</u>
(17)	<u>2,795,103</u>	(17)	<u>40,987</u>
(18)	<u>3,741</u>	(18)	<u>41,937</u>
(19)	<u>5,120</u>	(19)	<u>273,915</u>
(20)	<u>5,627</u>	(20)	<u>9,814</u>
36		34	
(16)	<u>70,418</u>	(16)	<u>6,147,523</u>
(17)	<u>328,650</u>	(17)	<u>2,459</u>
(18)	<u>3,170,689</u>	(18)	<u>2,063</u>
(19)	<u>407,289</u>	(19)	<u>6,073</u>
(20)	<u>67,405</u>	(20)	<u>9,156,240</u>

The next pages are questions (21)–(25).		37
(16)		439,186
(17)		706,921
(18)		65,978
(19)		98,451
(20)		380,619
		38
(16)		9,106,324
(17)		9,687
(18)		2,159
(19)		30,527
(20)		18,043
		39
(21)	28,754,601	
(22)	61,875	
(23)	976,342	
(24)	12,840,369	
(25)	36,984	

Dan Receipts (7 min)

42		40	
(21)	<u>78,652</u>	(21)	<u>7,049</u>
(22)	<u>92,305,784</u>	(22)	<u>4,578,096</u>
(23)	<u>91,073,642</u>	(23)	<u>3,695,817</u>
(24)	<u>20,817,693</u>	(24)	<u>764,058</u>
(25)	<u>6,031</u>	(25)	<u>1,205</u>
43		41	
(21)	<u>30,946,821</u>	(21)	<u>102,364</u>
(22)	<u>976,205</u>	(22)	<u>63,049,218</u>
(23)	<u>107,824</u>	(23)	<u>32,185</u>
(24)	<u>5,974</u>	(24)	<u>5,026,381</u>
(25)	<u>762,910</u>	(25)	<u>6,048,357</u>

Dan Receipts (7 min)

46		44	
(21)	<u>8,5 / 9,230</u>	(21)	<u>2 / 7,489</u>
(22)	<u>1,520</u>	(22)	<u>10,437</u>
(23)	<u>60,589,372</u>	(23)	<u>41,905</u>
(24)	<u>905,437</u>	(24)	<u>3,518</u>
(25)	<u>37,290,415</u>	(25)	<u>618,574</u>
47		45	
(21)	<u>5,173</u>	(21)	<u>1,960,352</u>
(22)	<u>8,931</u>	(22)	<u>935,842</u>
(23)	<u>8,790,623</u>	(23)	<u>5,641</u>
(24)	<u>86,729</u>	(24)	<u>42,381</u>
(25)	<u>2,159,786</u>	(25)	<u>24,986</u>

49		48
(26)	<u>40,736,925</u>	(21) <u>23,765</u>
(27)	<u>762,014</u>	(22) <u>1,376,294</u>
(28)	<u>83,702</u>	(23) <u>8,560</u>
(29)	<u>403,582</u>	(24) <u>9,817,602</u>
(30)	<u>206,519</u>	(25) <u>73,205,849</u>
50		
(26)	<u>614,372</u>	The next pages are questions (26)–(30).
(27)	<u>30,917,246</u>	
(28)	<u>6,391,587</u>	
(29)	<u>3,971,826</u>	
(30)	<u>5,082</u>	

Dan Receipts (7 min)

53		51	
(26)	<u>95,042,871</u>	(26)	<u>28,791</u>
(27)	<u>29,873</u>	(27)	<u>71,250,894</u>
(28)	<u>60,714,295</u>	(28)	<u>7,295</u>
(29)	<u>176,532</u>	(29)	<u>37,160,594</u>
(30)	<u>64,031,579</u>	(30)	<u>3,658,491</u>
54		52	
(26)	<u>3,180,645</u>	(26)	<u>937,546</u>
(27)	<u>5,162,308</u>	(27)	<u>9,304,517</u>
(28)	<u>47,193,650</u>	(28)	<u>25,418</u>
(29)	<u>90,217,485</u>	(29)	<u>9,584,270</u>
(30)	<u>38,257,461</u>	(30)	<u>5,230</u>

Dan Receipts (7 min)

57		55	
(26)	<u>6,025</u>	(26)	<u>2,891,537</u>
(27)	<u>475,698</u>	(27)	<u>3,510</u>
(28)	<u>1,086,243</u>	(28)	<u>406,387</u>
(29)	<u>51,963</u>	(29)	<u>1,069</u>
(30)	<u>486,371</u>	(30)	<u>86,907</u>
58		56	
(26)	<u>93,608</u>	(26)	<u>4,280</u>
(27)	<u>8,469</u>	(27)	<u>87,236</u>
(28)	<u>860,159</u>	(28)	<u>3,629</u>
(29)	<u>76,801</u>	(29)	<u>3,284</u>
(30)	<u>90,137</u>	(30)	<u>7,658,239</u>

Soroban Technology Lab

Dan Mental Calculation (3 min)

No.		Name	
Date		Score	

(A) Mental Sums

1	2	3	4	5	6	7
316	5,219	470	104	186	516	7,963
208	3,671	9,056	5,627	4,853	4,731	-806
459	-780	318	390	2,607	945	6,140
523	654	953	-968	319	6,821	-3,795
4,801	-390	647	-3,421	7,053	609	920
6,397	821	2,810	750	586	3,124	-136
				4,921	7,850	5,847

8	9	10	11	12	13	14
8,204	9,380	6,582	3,705	7,912	978	6,184
3,079	-7,601	3,160	512	5,670	401	7,619
645	352	904	9,675	-13,294	7,352	26,178
8,053	7,416	9,385	3,042	59,617	35,981	314
9,276	-2,098	7,241	670	846	470	-24,509
531	581	635	8,413	703	1,682	698
2,987	-6,739	8,296	21,569	3,426	4,569	730
1,604	2,045	7,014	427	-157	7,203	-3,251
			90,853	-9,820	58,329	4,907
					16,047	-12,586

(B) Mental Multiplication

(Note) Round down to the nearest integer

15	$53 \times 14 =$
16	$38 \times 72 =$
17	$95 \times 0.706 =$
18	$803 \times 27 =$
19	$59.2 \times 930 =$
20	$870 \times 204 =$
21	$4,012 \times 0.086 =$
22	$7,014 \times 5,428 =$

(C) Mental Division

(Note) Round down to the nearest integer

23	$3,240 \div 36 =$
24	$4,047 \div 57 =$
25	$94,368 \div 96 =$
26	$441 \div 8.93 =$
27	$102,489 \div 807 =$
28	$315.6 \div 0.519 =$
29	$4,570,192 \div 506 =$
30	$2,503.7 \div 0.2941 =$

Soroban Technology Lab

Dan Roots (7 min)

No.		Name	
Date		Score	

Square Root

(Note) Round to the place shown at the right

1	$\sqrt{43,467,649} =$	Integer
2	$\sqrt{4.3681} =$	2 decimals
3	$\sqrt{10,201} =$	Integer
4	$\sqrt{199,809} =$	Integer
5	$\sqrt{2,572,816} =$	Integer
6	$\sqrt{0.403225} =$	3 decimals
7	$\sqrt{2,652.25} =$	1 decimals
8	$\sqrt{3,643,812,496} =$	Integer
9	$\sqrt{96,196,864} =$	Integer
10	$\sqrt{0.20548089} =$	4 decimals
11	$\sqrt{92,025,649} =$	Integer
12	$\sqrt{836,889,603} =$	Integer
13	$\sqrt{98,248,026.85} =$	1 decimals
14	$\sqrt{2,388.090004} =$	3 decimals
15	$\sqrt{0.0651268349} =$	5 decimals
16	$\sqrt{39,049.7121} =$	2 decimals
17	$\sqrt{2,999,095,696} =$	Integer
18	$\sqrt{223,113,957} =$	Integer
19	$\sqrt{3.26091364} =$	4 decimals
20	$\sqrt{0.2625332644} =$	5 decimals

Cube Root

(Note) Round to the place shown at the right

21	$\sqrt[3]{40,565,745,856} =$	Integer
22	$\sqrt[3]{14,447.596} =$	1 decimals
23	$\sqrt[3]{1,767,520} =$	Integer
24	$\sqrt[3]{481,273.935} =$	1 decimals
25	$\sqrt[3]{315,821,241,000} =$	Integer
26	$\sqrt[3]{0.025412184} =$	3 decimals
27	$\sqrt[3]{684,962.743375} =$	2 decimals
28	$\sqrt[3]{0.778688} =$	4 decimals
29	$\sqrt[3]{451.217663} =$	2 decimals
30	$\sqrt[3]{0.180394011} =$	3 decimals

Soroban Technology Lab

Dan Applied Calculation (10 min)

No.		Name	
Date		Score	

- (1) Find the missing number.

$$406,371 - 52,800 \div 480 \times 60 = \square$$

Answer

- (9) At station A, trains leave every $\frac{1}{4}$ minutes and buses every $\frac{1}{8}$ minutes. A train and a bus left at 6 a.m. At what time will a train and a bus next leave together?

Answer

- (2) Find the missing number.

$$444,640 \div \square - 226 = 568$$

Answer

- (10) $\frac{1}{8}$ km/h is how many metres per second? (Round the metres to one decimal place.)

Answer

Fill in the blanks in the table below. The consumption tax rate is 10%. (Round the selling price and the price with tax down to the nearest yen.)

List price (yen)	Discount rate (%)	Selling price (yen)	Price with tax (yen)
267,940	45		(3)
939,000	(4)		733,359
(5)	14		727,474
207,400	36	(6)	

- (11) ¥310,000 is borrowed for $\frac{1}{79}$ days. What is the maturity value? The rate is 5.7% simple interest per year. (Round the interest to the nearest yen.)

Answer

- (7) An item was bought at 26% off the list price, and ¥38,258 was paid including consumption tax. What was the list price? The consumption tax rate is 10%.

Answer

- (12) ¥720,000 is borrowed for 1 year 7 months. At 9.5% simple interest per year, how much is repaid in principal and interest? (Round the interest to the nearest yen.)

Answer

- (8) Product A's output was 26,840 units last year and 23,490 units this year. What percentage of last year's output is this year's? (Round the percentage to one decimal place.)

Answer

- (13) A and B set off at the same time towards each other from points 5.2km apart. A walks 7 m per minute and B walks 59 m per minute. How many minutes after they set off do they meet?

Answer

Dan Applied Calculation (10 min)

- (14) Goods bought for ¥250,100 are to be sold at 18% off the list price and still yield a profit of 26% of the cost. What should the list price be?

Answer

- (19) This month a product had sales of ¥504,300, of which 75.9% were cash sales. How much were the cash sales? (Round to the nearest yen.)

Answer

- (15) 15,000 shares were sold at ¥465 per share. What are the net proceeds? A commission of 0.900% of the gross amount plus ¥2,500 is paid.

Answer

- (20) What is the area, in cm^2 , of a trapezium whose parallel sides are 35 cm and 72 cm and whose height is 48 cm?

Answer

- (16) A 4.9% coupon bond with a face value of ¥750,000 is bought at a market price of ¥97.60. What is the amount paid? The accrued interest covers 30 days. (Round the accrued interest down to the nearest yen.)

Answer

- (21) 849 items at ¥927 each were bought. Paying in dollars, how many dollars and cents is it? Take $\$1 = ¥119$. (Round up to the nearest cent.)

Answer

- (17) ¥530,000 is borrowed for 109 days at 8.6% simple interest per year. How much is the interest? (Round to the nearest yen.)

Answer

- (22) ¥942,000 is deposited for 4 years 3 months at 2% per year, compounded annually. How much is the interest? The fractional period earns simple interest, and amounts under ¥100 earn no interest in any period.

Answer

- (18) An item was given a list price with a profit of 39% on the cost, then sold at 12% off the list price, giving a profit of ¥94,860. What was the cost of the item?

Answer

- (23) A fixed asset costing ¥598,000, with a useful life of 25 years, is depreciated by the declining-balance method. What is the depreciation limit for period 3? (The accounts are closed once a year and a residual book value of ¥1 is kept. Round each period's depreciation limit down to the nearest yen.)

From the 200% declining-balance depreciation rate table (acquired on or after 1 April 2012)

Useful life 25 years 0.08

Answer

Dan Applied Calculation (10 min)

- (24) A fixed asset costing ¥6,981,000, with a useful life of 30 years, is depreciated by the straight-line method. What is the book value at the start of period 7? (The accounts are closed once a year and a residual book value of ¥/ is kept. Round each period's depreciation limit down to the nearest yen.)

From the straight-line depreciation rate table (acquired on or after / April 2007)

Useful life 30 years 0.034

Answer

- (25) A debt is repaid by ¥450,000 at the end of each half-year for 7 years. How much would settle it in one payment now? Interest is 5% per year, compounded semiannually. (Round to the nearest yen.)

From the Present Value of an Annuity table

2.5%, 13 periods 10.98318497

2.5%, 14 periods 11.69091217

2.5%, 15 periods 12.38137773

Answer

- (26) ¥5,700,000 is borrowed for 5 years at 8% per year, compounded semiannually. What is the maturity value? (Round to the nearest yen.)

From the Compound Amount table

8%, 5 periods 1.46932808

4%, 10 periods 1.48024428

Answer

- (27) ¥580,000 is paid at the end of each year for 5 years. What is the amount of the annuity? Interest is 4.5% per year, compounded annually. (Round to the nearest yen.)

From the Amount of an Annuity table

4.5%, 4 periods 4.27819113

4.5%, 5 periods 5.47070973

4.5%, 6 periods 6.71689166

Answer

- (28) An equal amount is deposited at the end of each half-year so as to have ¥9,130,000 in 5 years. What is the sinking fund payment for each period? Interest is 6% per year, compounded semiannually. (Round to the nearest yen.)

From the Annuity Payment table

6%, 5 periods 0.23739640

3%, 10 periods 0.11723051

Answer

- (29) ¥7,300,000 is borrowed for 3 years at 9% per year, compounded annually. What is the interest due at maturity? (Round to the nearest yen.)

From the Compound Amount table

9%, 3 periods 1.295029

From the Present Value table

9%, 3 periods 0.77218348

Answer

- (30) A debt of ¥810,000 due in 7 years is discounted at 9% per year, compounded annually. How much is it if paid now? (Round up to the nearest ¥100.)

From the Compound Amount table

9%, 7 periods 1.82803912

From the Present Value table

9%, 7 periods 0.54703424

Answer

Answers Dan

Multiplication

1	57,643,632	11	86,998,227,520	21	801,227,192,934
2	40,771,815	12	2,764	22	1,689,503
3	25,165	13	537,692,596,1	23	580,585,117,255
4	53,881,223	14	5,803,970	24	47,708,965,806
5	316,301,638	15	30,414,343,826	25	37,097,760
6	1,917,351,201	16	33,637,520,238	26	4,215,258,097
7	48,711	17	1,337,282,986	27	341,283,046,665
8	4,952	18	35,272,203,242	28	11
9	6,503,634,153	19	365,337,383	29	650,057,757,820
10	1,426,873,174	20	/	30	5,171,633

Division

1	5.337	7	94.333	13	6,229	19	3,502	25	173,611
2	518	8	521.56	14	72,411	20	15,818	26	52,512
3	7,994	9	6,997	15	17,478	21	763,302	27	100,352
4	39,778	10	571,353	16	16,040	22	4,513	28	73,509
5	6,486	11	6,900.3	17	464,042	23	72,835	29	5,210,234
6	0.148	12	522,505	18	57,680	24	6,430	30	6,470,203

Sums

1	2,379,152	9	1,978,346	17	-49,991,929	25	1,583,409,114
2	1,060,231	10	-154,829	18	148,045,223	26	1,474,262,390
3	1,493,493	11	27,800,794	19	166,523,167	27	-265,654,517
4	2,272,104	12	6,181,838	20	13,034,154	28	744,213,628
5	475,318	13	17,566,836	21	1,635,483,661	29	121,692,925
6	1,113,672	14	13,965,851	22	355,952,479	30	1,227,094,629
7	965,355	15	12,776,943	23	1,184,525,473		
8	2,082,198	16	133,185,355	24	247,488,051		

Receipts

1	2,016,103	9	695,504	17	15,632,099	25	120,155,097
2	1,620,059	10	1,378,194	18	14,344,779	26	143,536,600
3	1,268,938	11	6,829,639	19	24,700,089	27	118,001,765
4	1,528,448	12	10,891,409	20	20,445,439	28	116,772,365
5	1,281,649	13	8,303,791	21	70,615,496	29	141,647,406
6	839,419	14	16,603,006	22	163,304,202	30	114,486,016
7	1,620,610	15	17,317,988	23	165,321,911		
8	1,101,070	16	19,659,577	24	50,310,142		

Mental Calculation

1	12,704	7	16,133	13	133,012	19	55,056	25	983
2	9,195	8	34,379	14	6,284	20	177,480	26	49
3	14,254	9	3,336	15	742	21	345	27	127
4	2,482	10	43,217	16	2,736	22	38,071,992	28	608
5	20,525	11	138,866	17	67	23	90	29	9,032
6	24,596	12	54,903	18	21,681	24	71	30	8,513

Answers Dan

Roots

1	6,593	7	51.5	13	9,912	19	1.8058	25	6,810
2	2.09	8	60,364	14	48.868	20	0.51238	26	0.294
3	101	9	9,808	15	0.2552	21	3,436	27	88.15
4	447	10	0.4533	16	197.61	22	24.4	28	0.92
5	1,604	11	9,593	17	54,764	23	121	29	7.67
6	0.635	12	28,929	18	14,937	24	78.4	30	0.565

Applied Calculation

1	399,771	11	¥318,666	21	\$6,613.64
2	560	12	¥828,300	22	¥82,746
3	162,103	13	40 min	23	¥40,491
4	29	14	¥384,300	24	¥5,556,876
5	769,000	15	¥6,909,725	25	¥5,260,910
6	132,736	16	¥735,020	26	¥8,437,392
7	¥47,000	17	¥13,612	27	¥3,173,012
8	87.5%	18	¥425,000	28	¥796,415
9	8:06 a.m.	19	¥382,764	29	¥2,153,712
10	5.2m/s	20	2,568 cm ²	30	¥443,100