ACCT 2101
Exam 3 SOLUTION – Version 2
Fall Semester, 2011

Name Grading Guideline Section _____
(please print clearly)

Pledge:

On my honor, I have neither given nor received any unauthorized help on this quiz.

_____
(signed)

Instructions:

1. **You may not ask questions during the exam.** However, all notes you write to the instructor will be read and considered during the grading process.
2. The multiple-choice questions are based on the Class Exercises, the Problem Set, and our class discussions. The best approach for these questions is to work through them just like you did in class.
3. **For the problems, you must show all work to receive partial credit.**
4. Only the approved calculators may be used during the quiz.
5. You must write legibly or your answers will not be graded.
6. Do **NOT** pull this exam apart under any circumstances.
7. Make sure you have **10** numbered pages including the cover sheet.
8. Good luck!

Point Allocation:

Problem 1:	5.0
Problem 2:	2.0
Problem 3:	1.0
Problem 4:	2.0
TOTAL POINTS =	10 points

PROBLEM 1. MULTIPLE-CHOICE QUESTIONS ON LONG-TERM ASSETS & CURRENT LIABILITIES.

1. Which of the following equipment related costs is not capitalized on a balance sheet?
A. Equipment installation costs.
B. Transportation costs associated with the equipment purchase.
C. The equipment's purchase price.
D. Equipment maintenance costs.

ANSWER D

2. On January 1, 2010, Woodstock, Inc. purchased a machine costing $40,000. Woodstock also paid $1,000 for transportation and installation. The expected useful life of the machine is 6 years and the residual value is $5,000. How much is the annual depreciation expense assuming use of the straight-line depreciation method?
A. $6,000
B. $5,950
C. $5,750
D. $6,100

$(40{,}000 + 1{,}000) \div 6 \text{ years} = \$6{,}000 \text{ per year}$

ANSWER A

3. Warren Company plans to depreciate a new building using the double declining-balance depreciation method. The building cost $800,000. The estimated residual value of the building is $50,000 and it has an expected useful life of 25 years. Assuming the first year's depreciation expense was recorded properly, what would be the amount of depreciation expense for the second year?
A. $64,000
B. $30,720
C. $32,000
D. $58,880

First Year: $800{,}000 \times 2/25 = \$64{,}000$

Second Year: $(800{,}000 - 64{,}000) \times 2/25 = \$58{,}880$

ANSWER D

4. Which of the following properly describes the accounting for a patent?
A. Research and development costs associated with a patent are capitalized. F
B. Patent amortization expense is accounted for within the accumulated depreciation account. F
C. The patent will be amortized over its useful life. T
D. Their legal life extends to 70 years after the death of the inventor. F

ANSWER C

5. On January 1, 2010, Wasson Company purchased a delivery vehicle costing $40,000. The vehicle has an estimated 6-year life and a $4,000 residual value. Wasson estimates that the vehicle will be driven 100,000 miles. What is the vehicle's book value as of December 31, 2011 assuming Wasson uses the units-of-production depreciation method and the vehicle was driven 10,000 miles during 2010 and 18,000 miles during 2011?

A. $25,920
B. $29,920
C. $28,800
D. $24,800

ANSWER B

(40,000 - 4,000) ÷ 100,000 units = $0.36 per unit

2010: 10,000 x $0.36 = $3,600
2011: 18,000 x $0.36 = 6,480
Total Accum Depr $10,080

Book Value:
Cost $40,000
- Accum Depr <10,080>
Book Value $29,920

6. Carter Company disposed of an asset at the end of the eighth year of its estimated life for $10,000 cash. The asset's life was originally estimated to be 10 years. The original cost was $50,000 with an estimated residual value of $5,000. The asset was being depreciated using the straight-line method. What was the gain or loss on the disposal?

A. $5,500 gain
B. $10,000 gain
C. $1,000 loss
D. $4,000 loss

ANSWER D

Cost - Asset $50,000
Less: Accum Depr <36,000>
Book Value $14,000

[((50,000 - 5,000) ÷ 10 years) x 8]

Cash Received $10,000
- Book Value <14,000>
Loss <$4,000>

7. On March 1, 2010, Anniston Company purchased an oil well at a cost of $1,000,000. It is estimated that 150,000 barrels of oil can be produced over the remaining life of the well and the residual value of the well will be $100,000. During 2010, 15,000 barrels of oil were produced and 10,000 barrels were sold. Which of the following statements is correct with respect to the accounting for the oil well?

A. The book value of the oil well decreased $60,000 during 2010.
B. The inventory of oil increased $30,000 during 2010.
C. The 2010 cost of goods sold was $30,000.
D. The 2010 cost of goods sold was $90,000.

ANSWER B

(1,000,000 - 100,000) ÷ 150,000 barrels = $6 per barrel

Depletion = 15,000 x $6 = $90,000
COGS: 10,000 x $6 = <60,000>
Inventory $30,000

8. Which of the following properly describes the accounting for goodwill?

A. Goodwill is created when it is internally generated. F
B. Goodwill is the difference between the amounts paid for a company relative to the book value of the company's net assets. F
C. Goodwill is written-down when it has been determined to be impaired. T
D. Goodwill is amortized over its useful life. F

ANSWER C

9. The following is a partial list of account balances from the books of Probst Enterprise at the end of 2010:

Accounts payable	$20,500
Accounts receivable	12,300
Accrued interest on short-term note	1,200
Cash	6,500
Wages payable	1,300
Income taxes payable	1,900
Inventory	10,000

Quick Assets = Cash + Accts Rec
= 6,500 + 12,300 = $18,800

Current Liabilities =
20,500 + 1,200 + 1,300 + 1,900
= $24,900

Based solely upon these balances, what is the quick ratio?

A. 0.26 C. 0.76
B. 0.79 D. 1.15

$$\text{Quick Ratio} = \frac{18,800}{24,900} = 0.75502 \approx 0.76$$

ANSWER C

10. Miranda Company borrowed $100,000 cash on September 1, 2010, and signed a one-year 6%, interest-bearing note payable. Assuming no adjusting entries have been made during the year, the required adjusting entry at the end of the accounting period, December 31, 2010, would be which of the following?

A.	Interest expense	2,000	
	Interest payable		2,000
B.	Interest expense	6,000	
	Interest payable		6,000
C.	Notes payable	100,000	
	Interest expense	6,000	
	Cash		106,000
D.	Interest payable	2,000	
	Interest expense		2,000

A. Option A
B. Option B
C. Option C
D. Option D

$100,000 × 6% × 4/12 = $2,000

Interest Expense 2,000
Interest Payable 2,000

ANSWER A

PROBLEM 2. BOND VALUATION & ACCOUNTING.

On January 2, 2011, the Turner Company issued $600,000 of 13-year bonds payable. The bonds carry a contract rate of interest of 8% paid semiannually. The market interest rate was 12% on the date of issuance.

REQUIRED:

(a) Compute the market price of the bonds on the date of issuance. **Show all work to receive any credit.**

PV of principal:	$600,000 x PV (i=6%, n=26)	
	= $600,000 x 0.21981 =	$ 131,886
PV of interest:	($600,000 x 4%) x PVA (i=6%, n=26)	
	= $24,000 x 13.00317 =	312,076
Market Price of Bonds		$ 443,962

(b) Prepare the journal entry required on January 2, 2011, to record the bond issuance.

Cash	443,962	
Discount on Bonds Payable	156,038	
Bonds Payable		600,000

(c) In the question above, there is a difference between the bond price at issuance and the cash proceeds received. Explain the reason for this difference. That is, what is accomplished in this pricing approach?

The difference between the market price of the bonds and the face value of the bonds results from the contract rate differing from the market rate (bond yield). The market price received adjusts the contract rate to be exactly equal to the market rate. That is, the amount borrowed (cash proceeds) increases or decreases to make the effective rate on the bonds equal to the market's required rate of return.

PROBLEM 3. GOODWILL.

The Turner Company acquired the Hanson Company for a cash price of $2,575,000. In addition, the Turner Company assumed all liabilities of the Hanson Company as part of the acquisition. The following are the fair market values of the assets and liabilities of the Hanson Company that were acquired:

Accounts Receivable	$ 485,000
Inventories	330,000
Property, Plant, and Equipment	539,000
Patents	583,000
Accounts Payable	299,000
Notes Payable	732,000

REQUIRED:

(1) Record the journal entry to recognize the acquisition of the Hanson Company by the Turner Company.

Accounts Receivable		485,000	
Inventories		330,000	
Property, Plant, and Equipment		539,000	
Patents		583,000	
Goodwill *		1,669,000	
	Accounts Payable		299,000
	Notes Payable		732,000
	Cash		2,575,000

* Goodwill:	Cash Paid	$ 2,575,000
	+ Liabilities Assumed	+ 1,031,000
	= Total Price	$ 3,606,000
	- FMV of Assets	- 1,937,000
	= Goodwill	$1,669,000

(2) At the end of the second year after the acquisition, the fair value of the Goodwill has decreased by $350,000. Record the journal entry to recognize this decrease in value.

Loss from Impairment	350,000	
Goodwill		350,000

PROBLEM 4. Short Answer Questions. Please use complete sentences (both subject and predicate) in your answers.

(a) In our coverage of estimated liabilities, we discussed the obligation associated with retirement (pension) plans. In the context of that discussion, please answer the following questions:

(1) What is the difference between a defined contribution plan and a defined benefit plan?

A defined contribution plan is one in which the employer is obligated to make a fixed contribution (may be dollar amount or percentage of salary) into the employee's retirement account. The obligation ends with the transfer of the contribution amount.

A defined benefit plan is one in which the employer is obligated to contribute amounts to a retirement plan that will accumulate to an amount that will provide a specific benefit for their employees in the future. The factors affecting the required contribution are based on future events so the obligation is always being adjusted based on new projections.

(2) Why are the obligations associated with defined benefit plans so difficult to estimate? Be specific.

As indicated above, the factors that determine the contribution required to be made to a defined benefit plan are based on future events. Some of the factors that we talked about in class were: (a) years of total service provided by the employee, (2) salary at the end of the service period on which the benefit will be based, (3) future returns (interest and dividends) that will be earned by the retirement plan, (4) number of years an employee lives after retirement, and several other factors.

(b) What are junk bonds? How do you know that a bond is considered "junk"? What type of interest rate does a junk bond carry relative to other bonds?

Junk bonds are high-risk bonds – that is, bonds with a high probability of default.

Junk bonds are ones that carry a very low credit rating from one of the rating agencies (S&P, Moody's, Fitch).

Because junk bonds are so risky, they carry a very high rate of interest compared to lower-risk bonds.

PROBLEM 4 – CONTINUED.

(c) What impact does the term of a bond generally have on its yield? Explain why.

Usually, the longer the term, the higher the yield (effective interest rate).

Reason: When the term is longer, there is more risk of default and a greater risk of inflation.

(d) Define the following terms related to bonds:

(1) Serial bond:

These are bonds where the principal is repaid over multiple periods (i.e., in a series) rather than in one lump sum at the maturity date.

(2) Debenture:

These are unsecured bonds where there are no specific assets associated with the borrowing. The lenders are making their investment decisions based on the general creditworthiness of the company.

(3) Bond yield:

This is the market rate required by investors on a particular risk category of bonds (based on the term of bond and its credit rating).

(4) Contract rate:

This is the rate of interest to be paid on the bonds. This rate of interest is stated on the bond and determines the cash payments for interest over the life of the bond.

(5) Bearer bond:

This type of bond is not registered so there is no record-keeping of ownership. Physical custody of the bond is the evidence of ownership. (Remember *Die Hard.)*

PV = Present Value of $1

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.99010	0.98039	0.97087	0.96154	0.95238	0.94340	0.93458	0.92593	0.91743	0.90909	0.90090	0.89286	0.88496	0.87719	0.86957	0.86207	0.85470	0.84746	0.84034	0.83333
2	0.98030	0.96117	0.94260	0.92456	0.90703	0.89000	0.87344	0.85734	0.84168	0.82645	0.81162	0.79719	0.78315	0.76947	0.75614	0.74316	0.73051	0.71818	0.70616	0.69444
3	0.97059	0.94232	0.91514	0.88900	0.86384	0.83962	0.81630	0.79383	0.77218	0.75131	0.73119	0.71178	0.69305	0.67497	0.65752	0.64066	0.62437	0.60863	0.59342	0.57870
4	0.96098	0.92385	0.88849	0.85480	0.82270	0.79209	0.76290	0.73503	0.70843	0.68301	0.65873	0.63553	0.61332	0.59208	0.57175	0.55229	0.53365	0.51579	0.49867	0.48225
5	0.95147	0.90573	0.86261	0.82193	0.78353	0.74726	0.71299	0.68058	0.64993	0.62092	0.59345	0.56743	0.54276	0.51937	0.49718	0.47611	0.45611	0.43711	0.41905	0.40188
6	0.94205	0.88797	0.83748	0.79031	0.74622	0.70496	0.66634	0.63017	0.59627	0.56447	0.53464	0.50663	0.48032	0.45559	0.43233	0.41044	0.38984	0.37043	0.35214	0.33490
7	0.93272	0.87056	0.81309	0.75992	0.71068	0.66506	0.62275	0.58349	0.54703	0.51316	0.48166	0.45235	0.42506	0.39964	0.37594	0.35383	0.33320	0.31393	0.29592	0.27908
8	0.92348	0.85349	0.78941	0.73069	0.67684	0.62741	0.58201	0.54027	0.50187	0.46651	0.43393	0.40388	0.37616	0.35056	0.32690	0.30503	0.28478	0.26604	0.24867	0.23257
9	0.91434	0.83676	0.76642	0.70259	0.64461	0.59190	0.54393	0.50025	0.46043	0.42410	0.39092	0.36061	0.33288	0.30751	0.28426	0.26295	0.24340	0.22546	0.20897	0.19381
10	0.90529	0.82035	0.74409	0.67556	0.61391	0.55839	0.50835	0.46319	0.42241	0.38554	0.35218	0.32197	0.29459	0.26974	0.24718	0.22668	0.20804	0.19106	0.17560	0.16151
11	0.89632	0.80426	0.72242	0.64958	0.58468	0.52679	0.47509	0.42888	0.38753	0.35049	0.31728	0.28748	0.26070	0.23662	0.21494	0.19542	0.17781	0.16192	0.14757	0.13459
12	0.88745	0.78849	0.70138	0.62460	0.55684	0.49697	0.44401	0.39711	0.35553	0.31863	0.28584	0.25668	0.23071	0.20756	0.18691	0.16846	0.15197	0.13722	0.12400	0.11216
13	0.87866	0.77303	0.68095	0.60057	0.53032	0.46884	0.41496	0.36770	0.32618	0.28966	0.25751	0.22917	0.20416	0.18207	0.16253	0.14523	0.12989	0.11629	0.10421	0.09346
14	0.86996	0.75788	0.66112	0.57748	0.50507	0.44230	0.38782	0.34046	0.29925	0.26333	0.23199	0.20462	0.18068	0.15971	0.14133	0.12520	0.11102	0.09855	0.08757	0.07789
15	0.86135	0.74301	0.64186	0.55526	0.48102	0.41727	0.36245	0.31524	0.27454	0.23939	0.20900	0.18270	0.15989	0.14010	0.12289	0.10793	0.09489	0.08352	0.07359	0.06491
16	0.85282	0.72845	0.62317	0.53391	0.45811	0.39365	0.33873	0.29189	0.25187	0.21763	0.18829	0.16312	0.14150	0.12289	0.10686	0.09304	0.08110	0.07078	0.06184	0.05409
17	0.84438	0.71416	0.60502	0.51337	0.43630	0.37136	0.31657	0.27027	0.23107	0.19784	0.16963	0.14564	0.12522	0.10780	0.09293	0.08021	0.06932	0.05998	0.05196	0.04507
18	0.83602	0.70016	0.58739	0.49363	0.41552	0.35034	0.29586	0.25025	0.21199	0.17986	0.15282	0.13004	0.11081	0.09456	0.04081	0.06914	0.05925	0.05083	0.04367	0.03756
19	0.82774	0.68643	0.57029	0.47464	0.39573	0.33051	0.27651	0.23171	0.19449	0.16351	0.13768	0.11611	0.09806	0.08295	0.07027	0.05961	0.05064	0.04308	0.03670	0.03130
20	0.81954	0.67297	0.55368	0.45639	0.37689	0.31180	0.25842	0.21455	0.17843	0.14864	0.12403	0.10367	0.08678	0.07276	0.06110	0.05139	0.04328	0.03651	0.03084	0.02608
21	0.81143	0.65978	0.53755	0.43883	0.35894	0.29416	0.24151	0.19866	0.16370	0.13513	0.11174	0.09256	0.07680	0.06383	0.05313	0.04430	0.03699	0.03094	0.02591	0.02174
22	0.80340	0.64684	0.52189	0.42196	0.34185	0.27751	0.22571	0.18394	0.15018	0.12285	0.10067	0.08264	0.06796	0.05599	0.04620	0.03819	0.03162	0.02622	0.02178	0.01811
23	0.79544	0.63416	0.50669	0.40573	0.32557	0.26180	0.21095	0.17032	0.13778	0.11168	0.09069	0.07379	0.06014	0.04911	0.04017	0.03292	0.02702	0.02222	0.01830	0.01509
24	0.78757	0.62172	0.49193	0.39012	0.31007	0.24698	0.19715	0.15770	0.12640	0.10153	0.08170	0.06588	0.05323	0.04308	0.03493	0.02838	0.02310	0.01883	0.01538	0.01258
25	0.77977	0.60953	0.47761	0.37512	0.29530	0.23300	0.18425	0.14602	0.11597	0.09230	0.07361	0.05882	0.04710	0.03779	0.03038	0.02447	0.01974	0.01596	0.01292	0.01048
26	0.77205	0.59758	0.46369	0.36069	0.28124	0.21981	0.17220	0.13520	0.10639	0.08391	0.06631	0.05252	0.04168	0.03315	0.02642	0.02109	0.01687	0.01352	0.01086	0.00874
27	0.76440	0.58586	0.45019	0.34682	0.26785	0.20737	0.16093	0.12519	0.09761	0.07628	0.05974	0.04689	0.03689	0.02908	0.02297	0.01818	0.01442	0.01146	0.00912	0.00728
28	0.75684	0.57437	0.43708	0.33348	0.25509	0.19563	0.15040	0.11591	0.08955	0.06934	0.05382	0.04187	0.03264	0.02551	0.01997	0.01567	0.01233	0.00971	0.00767	0.00607
29	0.74934	0.56311	0.42435	0.32065	0.24295	0.18456	0.14056	0.10733	0.08215	0.06304	0.04849	0.03738	0.02889	0.02237	0.01737	0.01351	0.01053	0.00823	0.00644	0.00506
30	0.74192	0.55207	0.41199	0.30832	0.23138	0.17411	0.13137	0.09938	0.07537	0.05731	0.04368	0.03338	0.02557	0.01963	0.01510	0.01165	0.00900	0.00697	0.00541	0.00421
31	0.73458	0.54125	0.39999	0.29646	0.22036	0.16425	0.12277	0.09202	0.06915	0.05210	0.03935	0.02980	0.02262	0.01722	0.01313	0.01004	0.00770	0.00591	0.00455	0.00351
32	0.72730	0.53063	0.38834	0.28506	0.20987	0.15496	0.11474	0.08520	0.06344	0.04736	0.03545	0.02661	0.02002	0.01510	0.01142	0.00866	0.00658	0.00501	0.00382	0.00293
33	0.72010	0.52023	0.37703	0.27409	0.19987	0.14619	0.10723	0.07889	0.05820	0.04306	0.03194	0.02376	0.01772	0.01325	0.00993	0.00746	0.00562	0.00425	0.00321	0.00244
34	0.71297	0.51003	0.36604	0.26355	0.19035	0.13791	0.10022	0.07305	0.05339	0.03914	0.02878	0.02121	0.01568	0.01162	0.00864	0.00643	0.00480	0.00360	0.00270	0.00203
35	0.70591	0.50003	0.35538	0.25342	0.18129	0.13011	0.09366	0.06763	0.04899	0.03558	0.02592	0.01894	0.01388	0.01019	0.00751	0.00555	0.00411	0.00305	0.00227	0.00169
36	0.69892	0.49022	0.34503	0.24367	0.17266	0.12274	0.08754	0.06262	0.04494	0.03235	0.02335	0.01691	0.01228	0.00894	0.00653	0.00478	0.00351	0.00258	0.00191	0.00141
37	0.69200	0.48061	0.33498	0.23430	0.16444	0.11579	0.08181	0.05799	0.04123	0.02941	0.02104	0.01510	0.01087	0.00784	0.00568	0.00412	0.00300	0.00219	0.00160	0.00118
38	0.68515	0.47119	0.32523	0.22529	0.15661	0.10924	0.07646	0.05369	0.03783	0.02673	0.01896	0.01348	0.00962	0.00688	0.00494	0.00355	0.00256	0.00186	0.00135	0.00098
39	0.67837	0.46195	0.31575	0.21662	0.14915	0.10306	0.07146	0.04971	0.03470	0.02430	0.01708	0.01204	0.00851	0.00604	0.00429	0.00306	0.00219	0.00157	0.00113	0.00082
40	0.67165	0.45289	0.30656	0.20829	0.14205	0.09722	0.06678	0.04603	0.03184	0.02209	0.01538	0.01075	0.00753	0.00529	0.00373	0.00264	0.00187	0.00133	0.00095	0.00068

PVA = Present Value of an Annuity of $1

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.99010	0.98039	0.97087	0.96154	0.95238	0.94340	0.93458	0.92593	0.91743	0.90909	0.90090	0.89286	0.88496	0.87719	0.86957	0.86207	0.85470	0.84746	0.84034	0.83333
2	1.97040	1.94156	1.91347	1.88609	1.85941	1.83339	1.80802	1.78326	1.75911	1.73554	1.71252	1.69005	1.66810	1.64666	1.62571	1.60523	1.58521	1.56564	1.54650	1.52778
3	2.94099	2.88388	2.82861	2.77509	2.72325	2.67301	2.62432	2.57710	2.53129	2.48685	2.44371	2.40183	2.36115	2.32163	2.28323	2.24589	2.20958	2.17427	2.13992	2.10648
4	3.90197	3.80773	3.71710	3.62990	3.54595	3.46511	3.38721	3.31213	3.23972	3.16987	3.10245	3.03735	2.97447	2.91371	2.85498	2.79818	2.74324	2.69006	2.63859	2.58873
5	4.85343	4.71346	4.57971	4.45182	4.32948	4.21236	4.10020	3.99271	3.88965	3.79079	3.69590	3.60478	3.51723	3.43308	3.35216	3.27429	3.19935	3.12717	3.05763	2.99061
6	5.79548	5.60143	5.41719	5.24214	5.07569	4.91732	4.76654	4.62288	4.48592	4.35526	4.23054	4.11141	3.99755	3.88867	3.78448	3.68474	3.58918	3.49760	3.40978	3.32551
7	6.72819	6.47199	6.23028	6.00205	5.78637	5.58238	5.38929	5.20637	5.03295	4.86842	4.71220	4.56376	4.42261	4.28830	4.16042	4.03857	3.92238	3.81153	3.70570	3.60459
8	7.65168	7.32548	7.01969	6.73274	6.46321	6.20979	5.97130	5.74664	5.53482	5.33493	5.14612	4.96764	4.79877	4.63886	4.48732	4.34359	4.20716	4.07757	3.95437	3.83716
9	8.56602	8.16224	7.78611	7.43533	7.10782	6.80169	6.51523	6.24689	5.99525	5.75902	5.53705	5.32825	5.13166	4.94637	4.77158	4.60654	4.45057	3.30302	4.16333	4.03097
10	9.47130	8.98259	8.53020	8.11090	7.72173	7.36009	7.02358	6.71008	6.41766	6.14457	5.88923	5.65022	5.42624	5.21612	5.01877	4.83323	4.65860	4.49409	4.33893	4.19247
11	10.36763	9.78685	9.25262	8.76048	8.30641	7.88687	7.49867	7.13896	6.80519	6.49506	6.20652	5.93770	5.68694	5.45273	5.23371	5.02864	4.83641	4.65601	4.48650	4.32706
12	11.25508	10.57534	9.95400	9.38507	8.86325	8.38384	7.94269	7.53608	7.16073	6.81369	6.49236	6.19437	5.91765	5.66029	5.42062	5.19711	4.98839	4.79322	4.61050	4.43922
13	12.13374	11.34837	10.63496	9.98565	9.39357	8.85268	8.35765	7.90378	7.48690	7.10336	6.74987	6.42355	6.12181	5.84236	5.58315	5.34233	5.11828	4.90951	4.71471	4.53268
14	13.00370	12.10625	11.29607	10.56312	9.89864	9.29498	8.74547	8.24424	7.78615	7.36669	6.98187	6.62817	6.30249	6.00207	5.72448	5.46753	5.22930	5.00806	4.80228	4.61057
15	13.86505	12.84926	11.93794	11.11839	10.37966	9.71225	9.10791	8.55948	8.06069	7.60608	7.19087	6.81086	6.46238	6.14217	5.84737	5.57546	5.32419	5.09158	4.87586	4.67547
16	14.71787	13.57771	12.56110	11.65230	10.83777	10.10590	9.44665	8.85137	8.31256	7.82371	7.37916	6.97399	6.60388	6.26506	5.95423	5.66850	5.40529	5.16235	4.39770	4.72956
17	15.56225	14.29187	13.16612	12.16567	11.27407	10.47726	9.76322	9.12164	8.54363	8.02155	7.54879	7.11963	6.72909	6.37286	6.04716	5.74870	5.47461	5.22233	4.98966	4.77463
18	16.39827	14.99203	13.75351	12.65930	11.68959	10.82760	10.05909	9.37189	8.75563	8.20141	7.70162	7.24967	6.83991	6.46742	6.12797	5.81785	5.53385	5.27316	5.03333	4.81219
19	17.22601	15.67846	14.32380	13.13394	12.08532	11.15812	10.33560	9.60360	8.95011	8.36492	7.83929	7.36578	6.93797	6.55037	6.19823	5.87746	5.58449	5.31624	5.07003	4.84350
20	18.04555	16.35143	14.87747	13.59033	12.46221	11.46992	10.59401	9.81815	9.12855	8.51356	7.96333	7.46944	7.02475	6.62313	6.25933	5.92884	5.62777	5.35275	5.10086	4.86958
21	18.85698	17.01121	15.41502	14.02916	12.82115	11.76408	10.83553	10.01680	9.29224	8.64869	8.07507	7.56200	7.10155	6.68696	6.31246	5.97314	5.66476	5.38368	5.12677	4.89132
22	19.66038	17.65805	15.93692	14.45112	13.16300	12.04158	11.06124	10.20074	9.44243	8.77154	8.17574	7.64465	7.16951	6.74294	6.35866	6.01133	5.69637	5.40990	5.14855	4.90943
23	20.45582	18.29220	16.44361	14.85684	13.48857	12.30338	11.27219	10.37106	9.58021	8.88322	8.26643	7.71843	7.22966	6.79206	6.39884	6.04425	5.72340	5.43212	5.16685	4.92453
24	21.24339	18.91393	16.93554	15.24696	13.79864	12.55036	11.46933	10.52876	9.70661	8.98474	8.34814	7.78432	7.28288	6.83514	6.43377	6.07263	5.74649	5.45095	5.18223	4.93710
25	22.02316	19.52346	17.41315	15.62208	14.09394	12.78336	11.65358	10.67478	9.82258	9.07704	8.42174	7.84314	7.32998	6.87293	6.46415	6.09709	5.76623	5.46691	5.19515	4.94759
26	22.79520	20.12104	17.87684	15.98277	14.37519	13.00317	11.82578	10.80998	9.92897	9.16095	8.48806	7.89566	7.37167	6.90608	6.49056	6.11818	5.78311	5.48043	5.20601	4.95632
27	23.55961	20.70690	18.32703	16.32959	14.64303	13.21053	11.98671	10.93516	10.02658	9.23722	8.54780	7.94255	7.40856	6.93515	6.51353	6.13636	5.79753	5.49189	5.21513	4.96360
28	24.31644	21.28127	18.76411	16.66306	14.89813	13.40616	12.13711	11.05108	10.11613	9.30657	8.60162	7.98442	7.44120	6.96066	6.53351	6.15204	5.80985	5.50160	5.22280	4.96967
29	25.06579	21.84438	19.18845	16.98371	15.14107	13.59072	12.27767	11.15841	10.19828	9.36961	8.65011	8.02181	7.47009	6.98304	6.55088	6.16555	5.82039	5.50983	5.22924	4.97472
30	25.80771	22.39646	19.60044	17.29203	15.37245	13.76483	12.40904	11.25778	10.27365	9.42691	8.69379	8.05518	7.49565	7.00266	6.56598	6.17720	5.82939	5.51681	5.23466	4.97894
31	26.54229	22.93770	20.00043	17.58849	15.59281	13.92909	12.53181	11.34980	10.34280	9.47901	8.73315	8.08499	7.51828	7.01988	6.57911	6.18724	5.83709	5.52272	5.23921	4.98245
32	27.26959	23.46833	20.38877	17.87355	15.80268	14.08404	12.64656	11.43500	10.40624	9.52638	8.76860	8.11159	7.53830	7.03498	6.59053	6.19590	5.84366	5.52773	5.24303	4.98537
33	27.98969	23.98856	20.76579	18.14765	16.00255	14.23023	12.75379	11.51389	10.46444	9.56943	8.80054	8.13535	7.55602	7.04823	6.60046	6.20336	5.84928	5.53197	5.24625	4.98781
34	28.70267	24.49589	21.13184	18.41120	16.19290	14.36814	12.85401	11.58693	10.51784	9.60857	8.82932	8.15656	7.57170	7.05985	6.60910	6.20979	5.85409	5.53557	5.24895	4.98984
35	29.40858	24.99862	21.48722	18.66461	16.37419	14.49825	12.94767	11.65457	10.56682	9.64416	8.85524	8.17550	7.58557	7.07005	6.61661	6.21534	5.85820	5.53862	5.25122	4.99154
36	30.10751	25.48884	21.83225	18.90828	16.54685	14.62099	13.03521	11.71719	10.61176	9.67651	8.87859	8.19241	7.59785	7.07899	6.62314	6.22012	5.86171	5.54120	5.25312	4.99295
37	30.79951	25.96945	22.16724	19.14258	16.71129	14.73678	13.11702	11.77518	10.65299	9.70592	8.89963	8.20751	7.60872	7.08683	6.62881	6.22424	5.86471	5.54339	5.25472	4.99412
38	31.48466	26.44064	22.49246	19.36786	16.86789	14.84602	13.19347	11.82887	10.69082	9.73265	8.91859	8.22099	7.61833	7.09371	6.63375	6.22779	5.86727	5.54525	5.25607	4.99510
39	32.16303	26.90259	22.80822	19.58448	17.01704	14.94907	13.26493	11.87858	10.72552	9.75696	8.93567	8.23303	7.62684	7.09975	6.63805	6.23086	5.86946	5.54682	5.25720	4.99592
40	32.83469	27.35548	23.11477	19.79277	17.15909	15.04630	13.33171	11.92461	10.75736	9.77905	8.95105	8.24378	7.63438	7.10504	6.64178	6.23350	5.87133	5.54815	5.25815	4.99660

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