2-21

Recommended for 16 year olds to adult

BOOKLET TO ACCOMPANY
GAME AND PUZZLE PROGRAM II
FOR ADULTS AND TEENS

TIME FOR CHANGE

You have six U.S. coins.

They add up to \$1.15.

You cannot give anyone change for any other U.S. coin.

What are these six coins?

PHONEY CODE



Using the telephone dial above, decode these messages.

- 1. 86 23 67 668 86 23
- 2. 224425364638379768
- 3. 76268425 47 843 78839 63 762687
- 4. 3254773 63 843 786

You have one barrel filled with 31 quarts of wine. The only measures you have are two empty pitchers. There are no marks on the pitchers, hence the only amount you are able to measure exactly with the pitcher is its capacity. The capacity of the pitchers is different for each question.

Your problem in each case is to determine if it is possible to measure a specific number of quarts given the capacity of the pitchers. No wine may be spilled. Remember you have only the two pitchers and the barrel.

Please state if it is possible to solve the problems below. Check the YES or the NO box as appropriate. All capacities are in quarts.

Example				
Capacity	Capacity	Req.	Yes	No
Pitcher 1	Pitcher 2		8	
4	1	3		
The answer is y from barrel, the leaving 3 quart	n pour pitcher	1 into pit	cher 2:	

	Capacity Pitcher 1	Capacity Pitcher 2	Req.	Yes	No
1.	4	3	2		D
2.	8	3	4		D
3.	16	4	6		D.
4.	13	4	11		
5.	5	9	8	0	
6.	55	3	1	D	0
7.	7	8	16		0

SCALING DOWN

You have 9 marbles that look and feet exactly the same but one is different in weight.

You have a balancing scale.

What is the minimum number of tries at the balancing scale that are needed to locate the different marble.

A "try" is when you place those marbles you wish to balance on the scale and then notice what happens. Once you touch any of the marbles, it is now considered another "try".

Check the correct answer:

DA 2 tries

□B 3 tries
□C 4 tries

TREASURY AGENT

Assume you are a Federal Treasury agent in Fort Knox. You have been tipped off that out of ten large piles of gold in room 12, one pile is diluted gold. Not to arouse suspicion, you are conducting a secret investigation in the middle of the night by yourself. You know that regular gold weighs 5 lbs. per bar but diluted gold weighs only 4 lbs. per bar.

Your job is to find out which pile of gold is diluted gold. You remember that there is a penny weighing scale in the men's room, but you only have one penny and therefore may only use the scale once. You can put as many gold bars on the scale as you like, insert your penny, see how much it weighs, and then the scale clicks off.

Find which pile of gold is the diluted gold. The world economy and your pension depend on your success so try hard.

When you are done, turn 2-XL back on and he will tell you the answer.

POOL YOUR RESOURCES

Mr. Jones lives in a nice house and has a square swimming pool in his back yard. At each corner of the pool, is a nice large tree.

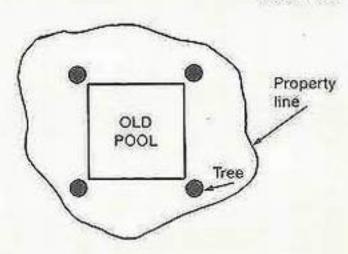
Mr. Jones' son, a contractor, says he will install a larger pool in Mr. Jones' back yard if it will lit. As a matter of fact the new pool will be twice as big as the old pool.

Mr. Jones is wondering if it is possible to install the new pool. He does not mind digging up the old pool but refuses to touch the four beautiful trees.

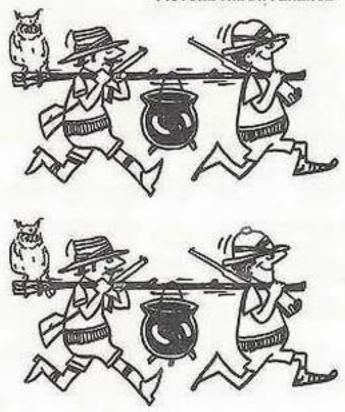
Mr. Jones' son reminds him that twice as big does not mean twice as deep. The perimeter must be twice as long, in addition, the new pool must be a perfect square.

Does Mr. Jones have room for this new pool?

YESD NOD



PICTURE THE DIFFERENCE



How many differences are there between these two pictures?

A = 10120

B = 3 or 4 0

C = 5 or 6 [

GAME CROSSWORD PUZZLE

Across

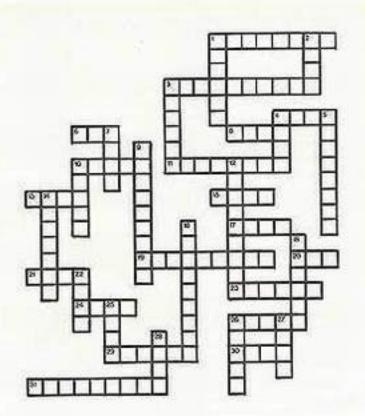
- 1. Deplor is only player
- 3. Goal-time triumphs
- 4. Board game soldier
- 6. Gverhead shot
- 8. Track equipment
- 10. Game with letters and numbers:
- 11. Make your own crosswords 13. Video bouncing built
- 15. "Giant step" question
- 17. Start a card game

- 19. Capture the King
- 20. Best not service
- 21, Word with 13 Across 23, Gell for checker's reward
- 24. Swimmor's routes
- 26. Unpredictable board lady
- 29. Swing that misses: 30. Corrida cheers
- 31, "21's" fastest win

Down

- 3. Lovingly scored game
- 4. Soccer's shiring star
- 5. Pitcher's perfection
- 7. Baller's smallest hit 9. The clue's a que
- 10. One over par
- 12. Prestigious game property

- 14. Last lonely picture-card loser
- 18. Three one-way wins
- 18. Get pieces home too late
- 22. Club game
- 25. Comino spats
- 26. Ringloss
- 27. Bridge position
- 28. Skater's milleu



ANSWER TO SCALING DOWN from page 3

- Take the 9 marbles and split them into 3 groups of 3 marbles each. Let's call them group X, Y, and Z.
- Take two of these groups, say X and Y and balance them. Assume they do not[®] balance. You now know that the phony marble is somewhere in these two groups. Take one of the two groups, such as X, and balance it against Z. If X rises the phony marble is in group X and is lighter. If group X goes down, you know that the phony is in group X but is heavier.
- Assume the former took place so you know that the marble is lighter and in group X.
- Take two marbles from group X and balance them.
 Whichever side goes up is the phony marble. If they balance, then the phony is the third marble from this group (X).

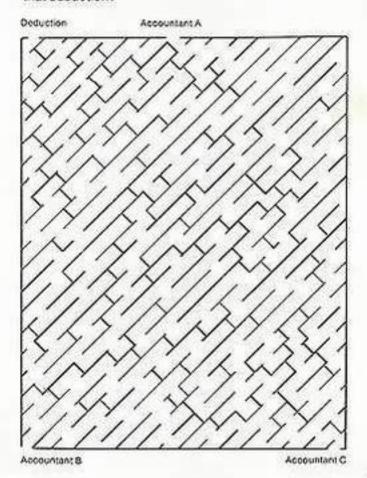
*If in the original weighing, groups X and Y balanced, you then know the phony is in group Z. Balance group Z against group X (which you know contains no phony). If Z goes up the phony is in this group (Z) and is lighter. If Z goes down, the phony is in group Z and is heavier.

Repeat steps 3 and 4.

NOTE: Therefore the answer is 3 tries at the balancing scale.

A-MAZE-YOURSELF

Which accountant can get through the maze and get to that deduction?



Answers to PITCH-IN from page 2

- Yes. Fill pitcher 2 to the top. Pour pitcher 2 into pitcher
 Fill pitcher 2 again and pour into pitcher 1 until pitcher 1 is full. This leaves 2 quarts (as required) in pitcher 2.
- Yes. Fill pitcher 2 and pour into pitcher 1. Repeat the
 process. Repeat again until pitcher 1 is full. This leaves
 one quart in pitcher 2. Empty pitcher 1 back into barrel.
 Pour pitcher 2 into pitcher 1. Fill pitcher 2 and pour into
 pitcher 1. Pitcher 1 now contains (as required) four
 quarts of wine.
- 3. No.
- 4. Yes. Fill pitcher 2 and pour into pitcher 1. Repeat process 2 more times. Repeat again until pitcher 1 is full. This leaves 3 quarts in pitcher 2. Empty pitcher 1 back into barrel. Pour pitcher 2 into pitcher 1. Fill pitcher 2 from barrel and pour into pitcher 1. Fill pitcher 2 again and pour into pitcher 1. Pitcher 1 now has (as required) 11 quarts of wine.
 - 5. No.
 - Yes. Fill pitcher 1 from barrel and pour into pitcher 2.
 Pour pitcher 2 back into barrel. Repeat this process 6 more times. 1 quart (as required) is left in pitcher 1.
- Yes. Fill pitchers 1 and 2 from barrel. This leaves 16 quarts (as required) in barrel.

SQUARE WORDS

A word square is derived from a crossword puzzle. The words read the same vertically as they do horizontally. Such as:



Complete these Squares on your own!

- 1. Form of necklace
- 2. Send out in exile
- 3. Eve's friend
- 4. Research for facts
- 5. Ice rain

- 1. Election participant
- 2. Carmen is an_
- Male singing voice
- 4. To wear a surface
- More scarce

Answer to TREASURY AGENT from page 4

Take 1 gold bar from pile one, 2 gold bars from pile two, 3 gold bars from pile three etc... until you have 10 gold bars from pile ten.

Put all of these gold bars (55 in total) on the scale and insert your penny.

If there were no diluted gold bars, the scale would read 275 pounds (5 pounds per bar times 55 bars).

If the diluted gold was in pile one, the scale will read 274 pounds, since one gold bar is only 4 pounds.

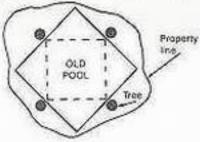
If the diluted gold was in pile two, the scale will read 273 pounds, since two gold bars only weigh 4 pounds.

If the diluted gold was in pile six, the scale would read 269 pounds, since 6 of the gold bars weigh only 4 pounds

In other words, the number of pounds less that 275 showing on the scale, represents the group containing the diluted gold bars.

Answer to POOL YOUR RESOURCES from page 5

YES Mr. Jones has room if he installs the new square pool on a diagonal.



Answers to GAME CROSSWORD PUZZLE

Across		
1. Solitare	13, Pong	24. Laps
3. Touchdowns	15. May 1	26. Queen
4. Pawn	17. Deal	29. Strike
6. Lob	19. Checkmate	30. Oles
8. Pole	20. Ace	31. Blackjack
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10. Bingo

21. Ping

11. Scrabble 23. King mo

Down

1. Sticks	9. Poelstick	22. Golf
2. Runs	10. Bogey	25. Pips
3. Tennis	12. Boardwalk	26. Quoit
4. Pela	14. Oldmaid	27. East
S. No hitter	16. Tic tac toe	28. Rink
7 Runt	18 Gamon	

The answer to BOX-COUNT is 152.

The answers to PHONEY CODE are:

- 1. To be or not to be
- 2. A chicken in every pot
- 3. Robotics is the study of robots
- 4. Eclipse of the sun

Answers to SQUARE WORDS from page 12

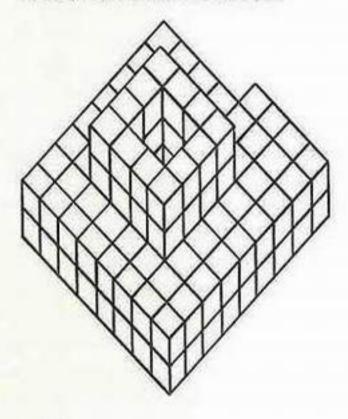
BEADS	VOTER
EXPEL	OPERA
APPLE	TENOR
DELVE	ERODE
SLEET	RARER

another A-MAZE-YOURSELF

If you can complete this maze in less than 4 minutes, you are pretty smart.

IN OUT

Count how many boxes are in this figure. The figure is solid except where the boxes indicate differently.



ANSWER.

Check your answer in the middle of page 14

PROFESSIONAL QUESTIONS

Select the correct answer that best describes the professional listed below. Circle the correct answer.

- 1. Tonsorialist
 - A. Throat doctor
 - B. Barber
 - C. Boat-mate
- 2. Prestidigitator
 - A. Magician
 - B. Locksmith
 - C. Clothes buyer
- 3. Choreographer
 - A. Dietician
 - B. Dress designer
 - C. Dance arranger
- 4. Sawyer
 - A. Woodcutter
 - B. Saddle maker
 - C. Violinist

- 5. Taxidermist
 - A. Limo driver
 - B. Animal stuffer
 - C. Skin doctor
- 6. Teamster
 - A. Hauler of goods
 - B. Iron worker
 - C. Club leader
- 7. Platonizer
 - A. Cook
 - B. Laminator of metals
 - C. Follower of Plato

PRESIDENTIAL PUZZLE

How many names of U.S. Presidents can you find below. Last names only. The names go up and down, backwards and forwards, and even diagonally. Circle the names as you find them

A	P	0	L	K	P	Z	F	L	L	K
L	1	P	N	L	p	T	R	T	1	W
LIN	E	W	0	W	G	F	1	R	N.	WRTN
N	R	M	X	R	H	A	E	M	C	T
H	C	0	1	T	W	T	N	M	CO	N
HKTURKEL	RCET	SMONROE	OXINLRT	LWRTEK	HWDTD	ATYAMAE	- EZDY	Y	L	A
T	T	R	L	K	T	A	Y	L	0	AR
U	R	0	R	D	D	M	M	1	S	G
R	R	E	T	R	0	A	W	S	D	P
K	M	R	00	ROFN	0000	E	WVRL	SET	SOLEF	G P T R
E		R	C	F	C	AO	R	T	E	R
L	AN	L	1	N	C	0	L	N	F	L

Believe it or not, there are 14 last names of presidents hidden in this puzzle.

OTHER PROGRAMS AVAILABLE FOR 2-XL

- SCIENCE FICTION
- MONSTERS AND MYTHS
- D SPORTS
- GUINNESS BOOK OF WORLD RECORDS
- BASIC METRIC SYSTEM
- INURSERY RHYMES AND FAIRY TALES
- SPORTS II
- □ GÉNERAL INFORMATION II
- D AMERICAN HISTORY
- DUS. PRESIDENTS
- BBELIEVE THIS OR NOT
- ☐ ASTRONOMY-2-XL IN SPACE
- GAMES AND PUZZLES II (ADULTS)
- ☐INTERVIEWS WITH GREAT PEOPLE FROM HISTORY
- ☐ GENERAL INFORMATION III
- GAMES AND PUZZLES I (FOR CHILDREN)
- III AND MORE

