

What Do You Call a Lamb Covered with Chocolate?

N	3
A	11
R	4
T	60
E	54
A	34
S	5
U	15
B	28
Y	2
A	80
D	75
C	10
N	13
E	12
M	6
A	92
O	55
H	20
C	17
A	64
L	32
T	7

Use the "guess and check" method to solve these problems:

(1) Guess an answer that meets one of the conditions.

(2) Check your guess to see if it meets the other condition.

Find each correct answer and cross out the letter next to it. When you finish, the answer to the title question will remain.

- Sum of two numbers = 15
Difference of the numbers = 3
Find the numbers.
What is their product?
- Sum of two numbers = 16
Difference of the numbers = 6
Find the numbers.
What is their product?
- Sum of two numbers = 13
Difference of the numbers = 1
Find the numbers.
What is the larger number?
- Sum of two numbers = 11
Product of the numbers = 24
Find the numbers.
What is their difference?
- Sum of two numbers = 14
Product of the numbers = 40
Find the numbers.
What is their difference?
- Sum of two numbers = 15
Product of the numbers = 36
Find the numbers.
What is the smaller number?
- The Vampires played 20 games.
The team won 4 more games
than it lost. How many games
did the Vampires win?
- Zarina said, "The sum of my
age and my father's age is 50.
The product of our ages is 400."
How old is Zarina?
- Ernie has twice as many
stickers as Bert. Together they
have 90 stickers. How many
stickers does Ernie have?
- Tommy said, "My mommy is 4
times as old as I am. The sum
of our ages is 40." How old is
Tommy's mommy?
- Henry's sister is 3 years
younger than Henry. The
product of their ages is 180.
How old is Henry?
- Dad is twice as old as Junior.
Gramps is twice as old as Dad.
The sum of the three ages is
140. How old is Gramps?
- The Cyclone Coaster has 16
cars. Some of them hold 2
passengers and some hold 3
passengers. If there is room for
36 people altogether, how many
cars hold 3 passengers?
- A math teacher drove past a
farmyard full of chickens and
pigs. The teacher noticed that
there were a total of 30 heads
and 100 legs. How many pigs
were there?

How Does a Beaver Know Which Tree to Cut Down?

Try working backward to help solve each problem. Find your answer in the answer box. Write the letter of the answer in each space containing the number of the problem.

- Susan made a deposit of \$74 to her bank account. She then had \$192 in the account. How much money was in the account before the deposit?
- Aram gave Steve 38 of his baseball cards. He then had 145 cards left. How many did he have to begin with?
- Mark weighs half as much as his father. If Mark weighs 76 pounds, how much does his father weigh?
- Karen's uncle said, "If you add 10 to my age and then double the sum, the result is 90." How old is Karen's uncle?
- Ms. Shoe kept 2 meatballs for herself, then divided the others equally among her 14 children. If each child got 5 meatballs, how many did Ms. Shoe have to begin with?
- A burglar trying to escape police got on the elevator in a tall building. He went up 8 floors, down 4 floors, up 3 floors, down 7 floors, and down 2 floors. If he finished on Floor 20, what floor did he start on?
- Bob's mother asked how he had done on a math test. Bob said, "If you multiply my score by 3, then subtract 40 from that answer, then divide by 2 you will get exactly 100." What was Bob's score?
- Keith bought a belt for \$9 and a shirt that cost 4 times as much as the belt. He then had \$10. How much money did Keith have before he bought the belt and shirt?
- Mom had just filled the cookie jar when the three children went to bed. That night, one child woke up, ate half the cookies, then went back to bed. Later, the second child woke up, ate half the remaining cookies, then went back to bed. Still later, the third child woke up, ate half the remaining cookies, leaving 3 cookies in the cookie jar. How many cookies were in the jar to begin with?
- Ms. Match went to a store, spent half of her money and then \$10 more. She went to a second store, spent half the money she had left and then \$10 more. She then had no money left. How much money did Ms. Match have when she started out?

(F) 38	(W) 24	(T) 67	(R) 35	(B) 144 lb	(V) 80
(S) 72	(D) 84	(I) \$118	(L) 194	(N) \$55	(A) 28
(H) \$60	(C) 152 lb	(E) 22	(P) \$50	(O) 183	(U) \$98

9	10	1	3	10	6	7	6	4	2	8	6	10	6	3	10	6	9	5
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WHERE WILL YOU FIND THE CENTER OF GRAVITY?

For each original problem, there is a simpler problem. Solve the simpler problem. Then choose the correct method for solving the original problem. Write the letter of the correct choice in the box containing the answer to the simpler problem.

100	300	12	25	30	8	40	10
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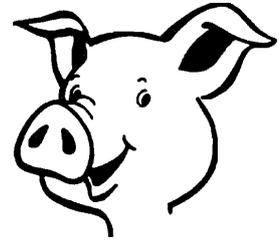
Original Problem	Simpler Problem	Method for Solving Original Problem
Jelly Junior High ordered 12 computers and 4 video recorders. The computers sell for \$979 each, but the school got a discount and paid only \$851 each. Each video recorder cost \$259. How much did the school pay for the computers?	The school bought 3 computers and paid \$100 for each. How much was paid for the computers? \$ _____	<input type="radio"/> L $979 - 851$ <input type="radio"/> T 12×851
The fastest speed at which humans have traveled is 24,791 miles per hour when the <i>Apollo 10</i> reached its maximum speed 400,000 feet above the earth. At this speed, how long would it take to travel to the moon, a distance of 233,812 miles?	How long would it take a person traveling 10 miles per hour to travel 80 miles? _____ h	<input type="radio"/> O $400,000 - 233,812$ <input type="radio"/> E $233,812 \div 24,791$
A team of 8 horses pulled a stagecoach toward Dodge City in 1869. It carried 3 strongboxes, each with \$4,750 in gold coins. The stagecoach was attacked by 4 outlaws who stole \$10,392. What was the value of the gold left on the stagecoach?	A stagecoach carried 3 boxes, each holding \$100. Outlaws stole \$200. How much was left? \$ _____	<input type="radio"/> A $(3 \times 4,750) - 10,392$ <input type="radio"/> S $(4 \times 10,392) - 4,750$
When Rolex Glomgold died at the age of 78, his estate was worth \$916,694. His will directed that \$134,250 be split between 2 charities and the rest divided equally among his 29 grandchildren. How much did each grandchild receive?	Rolex died and left \$100. \$10 went to charity. The rest was divided equally among 3 people. How much did each receive? \$ _____	<input type="radio"/> N $2 \times 134,250 \times 29$ <input type="radio"/> H $\frac{916,694 - 134,250}{29}$
Mr. Pumpernickel's 1989 Buick gets 27 miles per gallon when traveling at 50 miles an hour. At this rate, how much gasoline is needed to travel from Miami to Dallas, a distance of 1,338 miles, and then back again to Miami?	A car gets 20 miles per gallon. How much gas is needed to travel 100 miles and back again? _____ gal	<input type="radio"/> R $50 \times 27 \times 1,388$ <input type="radio"/> V $\frac{2 \times 1,388}{27}$
Chad works 13 hours a week after school. He earns \$4.85 an hour. He also spends 7 hours a week practicing the violin. He saved all his earnings for 6 weeks and bought a new violin for \$347. How much money did he have left?	Chad works 10 hours a week and earns \$5 an hour. He saved his earnings for 2 weeks and then spent \$75. How much did he have left? \$ _____	<input type="radio"/> T $(13 \times 4.85 \times 6) - 347$ <input type="radio"/> C $(6 \times 7 \times 4.85) - 347$

What Train Do Pigs Ride?

For each exercise, write all the possibilities for the situation in an organized list. Then answer the question and circle your answer in the answer column.

When you finish, write the letters in order from the letter of the smallest correct answer to the letter of the largest correct answer.

- ① A radio disk jockey has chosen the next 3 songs he will play, but he hasn't decided in what order to play them. How many choices does he have?
- ② At Micron Middle School, each student must take two of these classes: art, music, keyboarding, cooking, or shop. How many different combinations does the student have from which to choose?
- ③ Susan bought 2 skirts, 4 blouses, and 2 sweaters to wear as different outfits. How many different combinations can she make that include a skirt, a blouse, and a sweater? (*HINT Call the skirts A and B; the blouses 1, 2, 3, and 4; the sweaters X and Y.*)
- ④ There are 3 trombone players and 3 saxophone players in the school band. The director needs 2 trombone players and 1 saxophone player for a special performance. How many different choices does the director have?
- ⑤ Wilbur has trophies in football, soccer, bowling, and tennis. He lines them up on a shelf in his room. How many different arrangements of the 4 trophies are possible?
- ⑥ The telephone operator has told Jed to deposit 60 cents. In how many ways can he do this using nickels, dimes, and quarters?
- ⑦ A student must answer any 3 of the 4 essay questions on a social studies test. How many different selections of questions can be made?
- ⑧ A computer game lets you create funny animals by combining the head of one animal, the body of another animal, and the legs of a third animal. You can choose the head of an elephant, gorilla, or lion; the body of a horse or ostrich; and the legs of a camel, duck, or pig. How many different animals can be made?



Answers	
Ⓒ	7
Ⓐ	16
⒴	11
Ⓜ	9
⓪	20
Ⓐ	6
Ⓐ	15
Ⓒ	18
Ⓓ	10
Ⓚ	24
Ⓐ	4
Ⓢ	30
Ⓡ	13
Ⓟ	17

Letter of smallest correct answer ⇒

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← Letter of largest correct answer

Why Is a Stick of Gum Like a Sneeze?

Make a table and look for a pattern to help you solve each problem. As an example, a table has been started for the first exercise.

Find each answer and cross out the letter next to it. When you finish, the answer to the title question will remain.

- ① Zelda's parents put \$100 in a savings account on Zelda's first birthday. Each year on her birthday they put in \$200 more than on her last birthday.
- A. What will the total be when Zelda is 7 years old?
 - B. What will the total be when Zelda is 10 years old?

T	3,640
W	\$275
M	\$80
I	\$4,900
E	\$9,600
U	550
H	4
K	\$255
C	\$110
A	630
S	15
U	11
T	3,950
G	13
N	6
I	\$4,400
W	\$10,000

year	1	2	3	4	5						10
amount	100	300	500	700							
total	100	400	900								

② Dr. Dorque wrote a book called *1001 Random Numbers in Ascending Order*. In the first month after it was published, 10 copies were sold. In the second month, 30 copies were sold. In the third month, 60 copies were sold. In the fourth month, 100 copies were sold. If this pattern continues,

- A. How many copies will be sold in the tenth month?
- B. How many copies will be sold altogether in a year?

③ A subway train left downtown with 121 passengers aboard. At the first stop, 1 person got off. At the second stop, 3 people got off. At the third stop, 5 people got off. At the fourth stop, 7 people got off. If this pattern continues,

- A. How many people will get off at the 7th stop?
- B. How many stops will the train have made when all the passengers are off?

④ Bob's aunt offered him a choice of rewards for getting good grades. If he chooses Plan 1, she will give him \$10 for every "A" on his report card. If he chooses Plan 2, she will give him \$1 for the first "A," plus \$2 for the second "A," plus \$4 for the third "A," and so on, doubling with each additional "A." Bob gets 8 different grades on his report card.

- A. If Bob chooses Plan 1 and gets an "A" in every class, how much money will he receive?
- B. If Bob chooses Plan 2 and gets an "A" in every class, how much money will he receive?
- C. How many "A" grades must Bob receive to make Plan 2 the better choice?

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How Did the Hunter Get Hurt While Bending Over to Study Some Tracks?

Draw a picture to help solve each problem. Cross out the box containing each correct answer. When you finish, write the letters from the remaining boxes in the spaces at the bottom of the page.

- 1 Hope's Mom baked a cake for Hope's birthday. It is in the shape of a rectangle 10 inches long and 6 inches wide. If she starts at one corner and puts a candle every 2 inches, how many candles will fit around the edge of the cake?

- 2 The deck in Hope's backyard is round. It has 5 posts evenly spaced around the edge to support a trellis. For her birthday party, she wants to connect each post to all the other posts with crepe-paper streamers. How many streamers will she need?

- 3 Four friends went to a park to fly kites. Asher stood 50 feet due west of the flagpole. Baxter stood 50 feet due north of Asher. Cranby stood 100 feet due east of Baxter. Dudley stood 50 feet due south of Cranby. How far was Dudley from the flagpole?
_____ ft
- 4 Asher's kite flew the highest. Baxter's kite was 50 feet lower than Asher's but 100 feet higher than Cranby's. Cranby's kite was 100 feet higher than Dudley's. Dudley's kite was 300 feet above the ground. How high was Asher's kite?
_____ ft
- 5 Gompers is trying to cut a round pizza into the largest possible number of pieces with 3 straight cuts of the knife. He can't restack or rearrange the pieces after a cut. What is the largest number of pieces he can cut?

- 6 Derek planted a garden in the shape of a square 32 feet on each side. The garden has a stream on one side, but he plans to build a fence on the other three sides. If he puts a fencepost every 8 feet, how many posts will he need?

- 7 Driving along Route 77, Zeke passed the towns of Bam, Jam, Ram, and Wam, in that order. He noticed it was 27 miles from Bam to Jam and 33 miles from Ram to Wam. On his return trip, he noticed it was 100 miles from Wam to Bam. How far is it from Jam to Ram?
_____ mi
- 8 Five cars entered the Euclidean Grand Prix auto race. They were given numbers for identification. Car 33 came in last. Car 55 came in ahead of Car 22 but behind Car 44. Car 22 came in ahead of Car 66. Which car won the race?

HE 13	AT 22	ST 50	SH 44	RA 19	SK 16	OT 40
IN 650	HI 66	BE 550	TH 52	HU 10	NT 7	IM 100

Why Was the Fencing Champion So Honest?



What logical conclusion, if any, follows from the given statement? For each exercise, circle the letter of the better choice. Write this letter in each box containing the number of the exercise.



- | | |
|--|--|
| <p>1. All whales are mammals. Moby is a whale.</p> <p>(F) Moby is a mammal.</p> <p>(T) No conclusion is possible.</p> <p>3. All elephants are wrinkled. Ajax is an elephant.</p> <p>(N) Ajax is wrinkled.</p> <p>(B) No conclusion is possible.</p> <p>5. All librarians like to read books: Marion is a librarian.</p> <p>(O) Marion likes to read books.</p> <p>(U) No conclusion is possible.</p> <p>7. All squares have 4 sides. Susan drew a 4-sided figure.</p> <p>(L) Susan drew a square.</p> <p>(D) No conclusion is possible.</p> <p>9. Some radio stations play music. KISS is a radio station.</p> <p>(U) KISS plays music.</p> <p>(R) No conclusion is possible.</p> <p>11. Allen is taller than Bill. Bill is taller than Charles. Charles is taller than David. Which of the following is true?</p> <p>(M) Allen is taller than David.</p> <p>(C) Charles is taller than Allen.</p> | <p>2. All islands are surrounded by water. Java is an island.</p> <p>(A) Java is surrounded by water.</p> <p>(I) No conclusion is possible.</p> <p>4. All elephants are wrinkled. Clyde is wrinkled.</p> <p>(S) Clyde is an elephant.</p> <p>(E) No conclusion is possible.</p> <p>6. All librarians like to read books. Terry likes to read books.</p> <p>(C) Terry is a librarian.</p> <p>(I) No conclusion is possible.</p> <p>8. All squares have 4 sides. Susan drew a square.</p> <p>(H) Susan drew a 4-sided figure.</p> <p>(B) No conclusion is possible.</p> <p>10. Some flowers are roses. Carlos bought a flower.</p> <p>(L) Carlos bought a rose.</p> <p>(W) No conclusion is possible.</p> <p>12. Kong is stronger than Wong. Wong is stronger than Hong. Hong is stronger than Pong. Pong is stronger than Tong. Which of the following is true?</p> <p>(T) Pong is stronger than Kong.</p> <p>(S) Wong is stronger than Tong.</p> |
|--|--|

8	4		10	2	12		2		11	2	3		5	1		8	6	12		12	10	5	9	7
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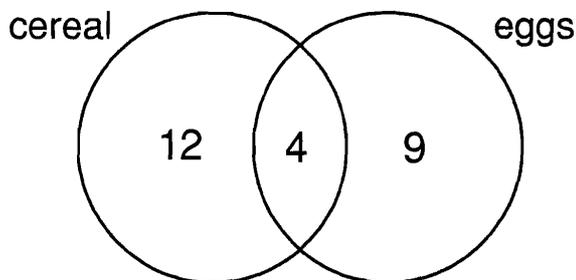
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What Did the Hiker Say As He Removed His Backpack?

Do each exercise and find your answer at the bottom of the page.
Write the letter of the exercise in the box containing the answer.

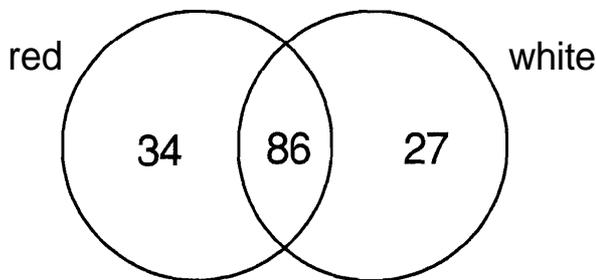
A teacher asked students in her class what they had eaten for breakfast.
According to the Venn diagram, how many students had eaten:

- (F) cereal?
- (A) cereal but not eggs?
- (Y) eggs?
- (H) eggs but not cereal?
- (I) both eggs and cereal?



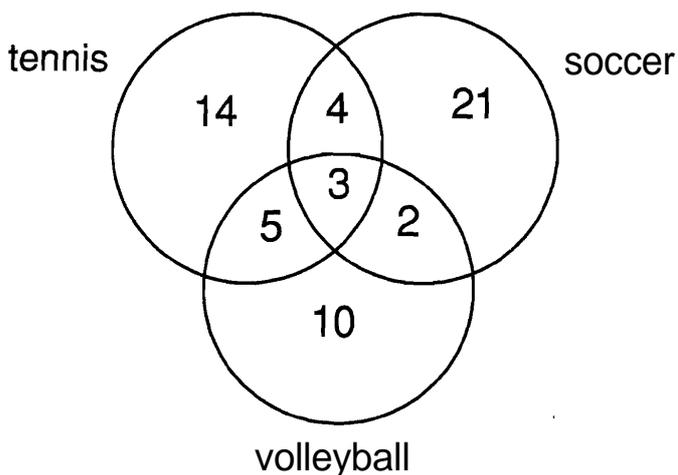
A geography class made a study of the colors used in national flags.
According to the Venn diagram, how many flags contain:

- (L) red?
- (T) red but not white?
- (E) white?
- (A) white but not red?
- (S) both red and white?



A survey was taken to find how many students play certain sports.
According to the Venn diagram, how many students play:

- (O) tennis?
- (S) tennis but not soccer or volleyball?
- (T) soccer?
- (D) soccer but not tennis or volleyball?
- (M) volleyball?
- (A) volleyball but not tennis or soccer?
- (F) both tennis and soccer?
- (N) both tennis and volleyball?
- (O) both soccer and volleyball?
- (P) all three sports?



30	9	10	34	14	12	120	5	27	21	26	7	16	20	13	86	3	4	8	113
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What Did the Mechanical Man Do When He Ran Out of Money at a Poker Game?

Solve each problem below. Find your solution and notice the two letters next to it. Write these letters in the two boxes above the exercise number at the bottom of the page.



- ① In the Land of Pi, there are six cities arranged in a circle. Each city is connected to every other city by a straight road. How many roads are there?
- ② Tom made a New Year's resolution to stop spending all his money. He has a plan. During January, he will save \$1. During February, he will save \$3. During March, he will save \$5. During April, he will save \$7. If he continues to follow this plan, how much money will he save altogether in one year?
- ③ At a math contest, 12 problems were given. Five points were awarded for each correct answer, and two points were deducted for each incorrect answer. Matt's score was 39. How many correct answers did he have?
- ④ In the mythical kingdom of Permutatus, wizards have special 2-digit license plates. The first digit is greater than 6, and the second digit is odd. The two digits cannot be the same. How many different license plates are possible?
- ⑤ Today is the teacher's birthday. The teacher said: "If you multiply my age by 3, then subtract 20, the result is 100." How old is the teacher?
- ⑥ Tex is building a corral in the shape of a rectangle 40 feet long and 32 feet wide. He plans to put a fencepost every 8 feet around the corral. How many posts will he need?
- ⑦ Samantha has five objects, weighing 1 kg, 2 kg, 3 kg, 4 kg, and 5 kg. If she weighs them two at a time, how many *different* weights can she get?
- ⑧ The science club wants to charter a bus to the Space Museum. The Red Line charges \$50 for the first hour plus \$30 for each additional hour. The Blue Line charges \$100 for the first hour plus \$20 for each additional hour. What is the smallest number of hours for which the two lines would charge the same amount?

- SL \$136
- TA 4
- IS 13
- PU 36
- WI 15
- AS 21
- RE 7
- IN \$180
- TH 9
- HE 40
- HA 6
- GO 8
- ND \$144
- NH 18
- RI 11

5	3	7	1	6	4	8	2						

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