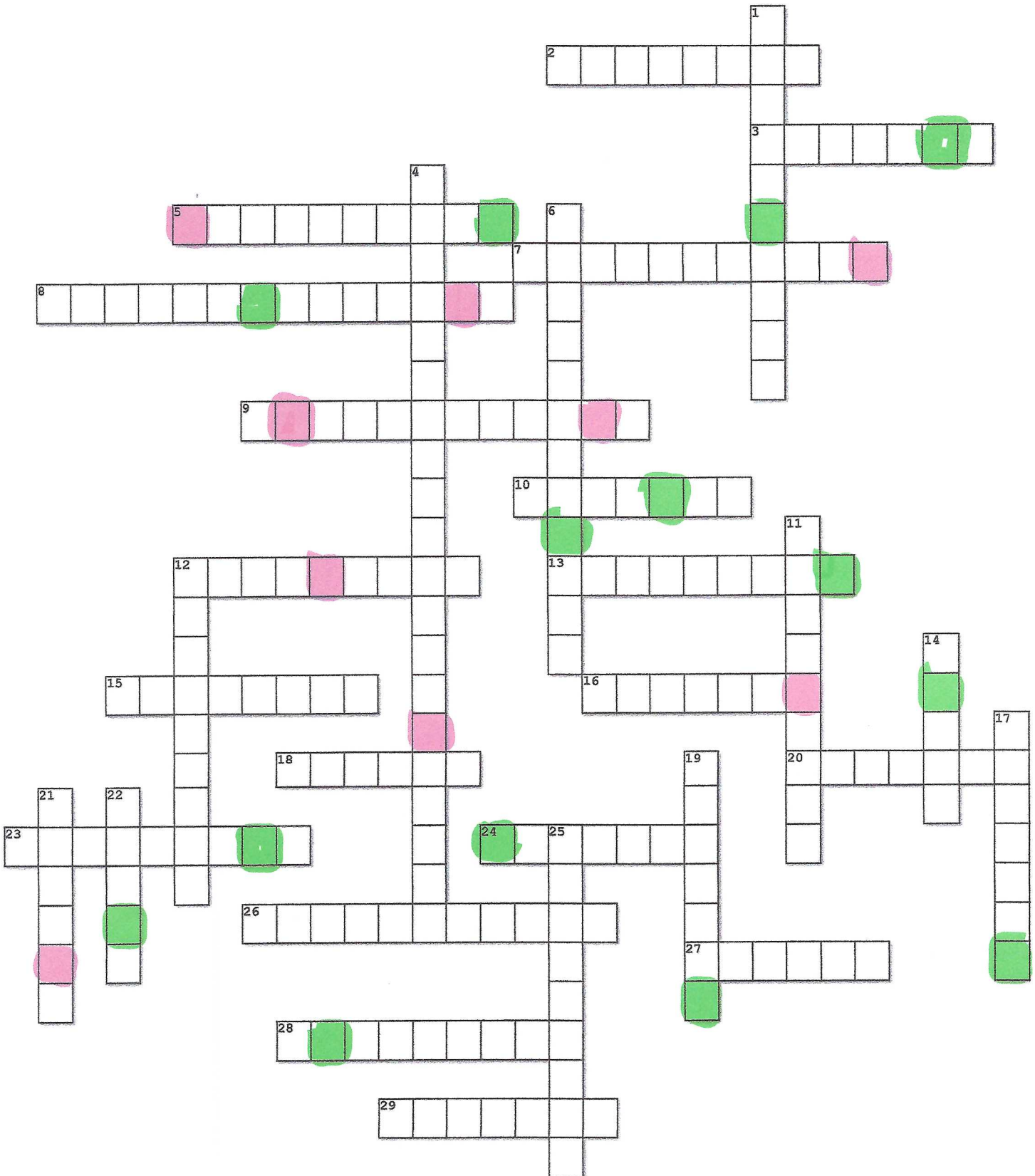


Name: _____

Wobblebot Puzzle

Complete the crossword puzzle below. Use the circled letters to find the scrambled word on the next sheet.



Across

2. tool used to cut something
3. Native American Invention used in medicine
5. This skill gave the hunters an advantage allowing them to get close to the buffalo without being seen
7. Combines science, engineering, and technology to study matter and processes at the nanoscale.
8. The usage of matter on the nanometer scale to produce structures, systems, and technological devices.
9. The application of nanotechnology to solve medical problems.
10. a bed made of canvas or of rope mesh and suspended by cords
12. You must build this in activity two
13. a device or process that has been created or made up
15. helps to fight infections
16. not physically existing as such but made by software to appear to do so
18. Carriers of medicine bundles or bags
20. main source of food for plains Indians
23. Length scale applicable to nanotechnology (i.e., 1-100 nanometers).
24. Robots that carry out a very specific function and are 50 nm wide
26. A nanoscale device capable of performing mechanical movements due to responses to specific stimuli.
27. polymer processed to make items such as tires
28. to invite to compete against
29. Used by hunters to hide themselves while hunting

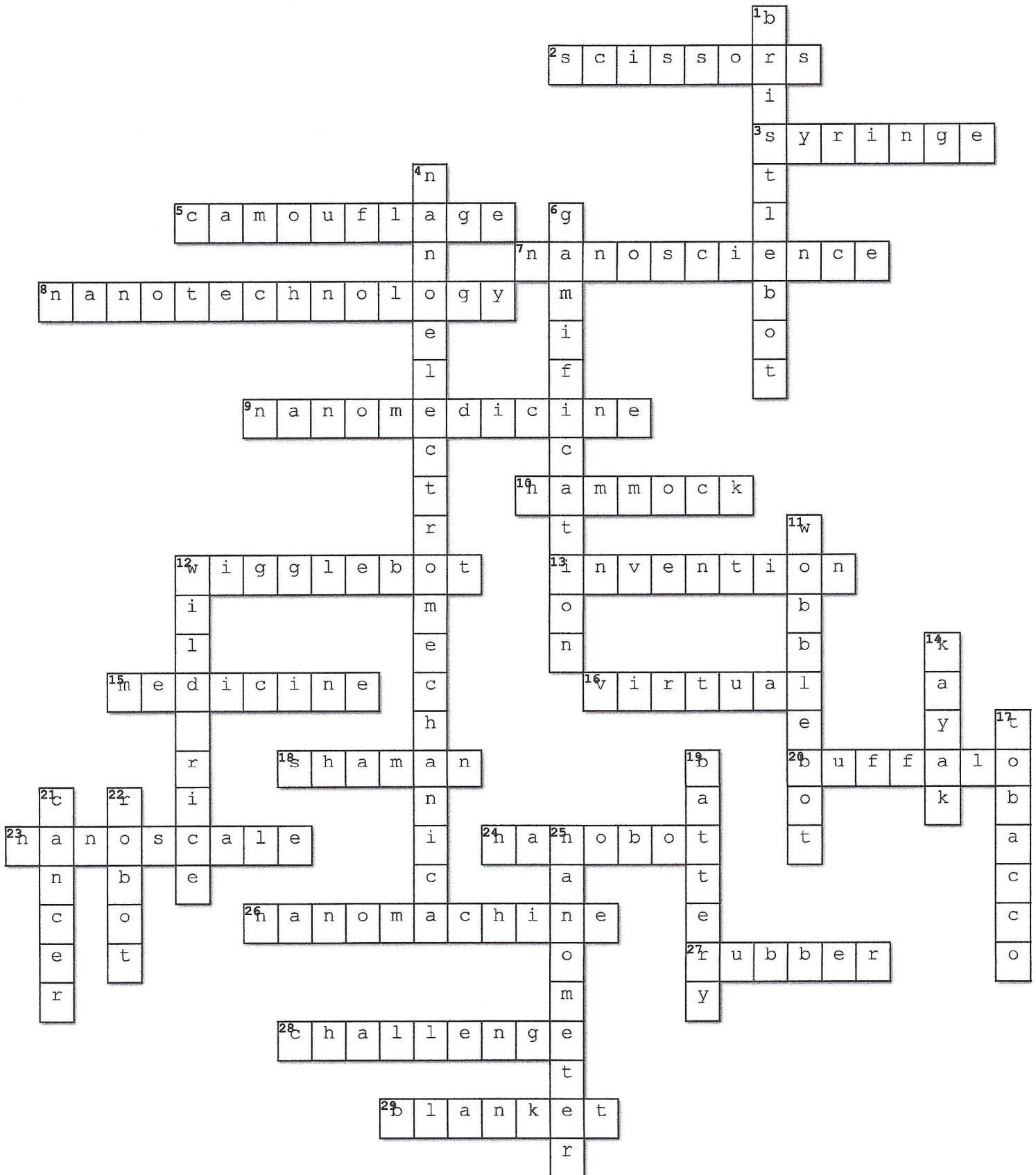
Down

1. toothbrush and batteries
4. A generic term to describe nanoscale electrical/mechanical devices.
6. Game based learning creates fun.
11. made in activity three
12. used by Plains Indians, North American edible grain
14. a canoe of a type used originally by the Inuit,
17. item found in medicine bag and can be smoked
19. a container consisting of one or more cells, in which chemical energy is converted into electricity and used as a source of p
21. a disease caused by an uncontrolled division of abnormal cells in a part of the body
22. a machine resembling a human being and able to replicate certain human movements and functions automatically:
25. one billionth of a meter or 1/1000 of a micrometer.

Name: _____

Wobblebot Puzzle

Complete the crossword puzzle below. Use the circled letters to find the scrambled word on the next sheet.



Name: _____

Wobblebot Scramble Word

You should have these letters from the Wobblebot Puzzle. Use those letters to unscramble the following two words.

Created on TheTeachersCorner.net Scramble Maker

1. otnocyhnoeang

(Green)

2. hglecelna

(Pink)

Name: _____

Wobblebot Scramble Word

You should have these letters from the Wobblebot Puzzle. Use those letters to unscramble the following two words.

Created on TheTeachersCorner.net Scramble Maker

1. otnocyhnoeang nanotechnology

2. hglecelna challenge

MAZE CRAZE

Can you find your way through the crazy maze below?



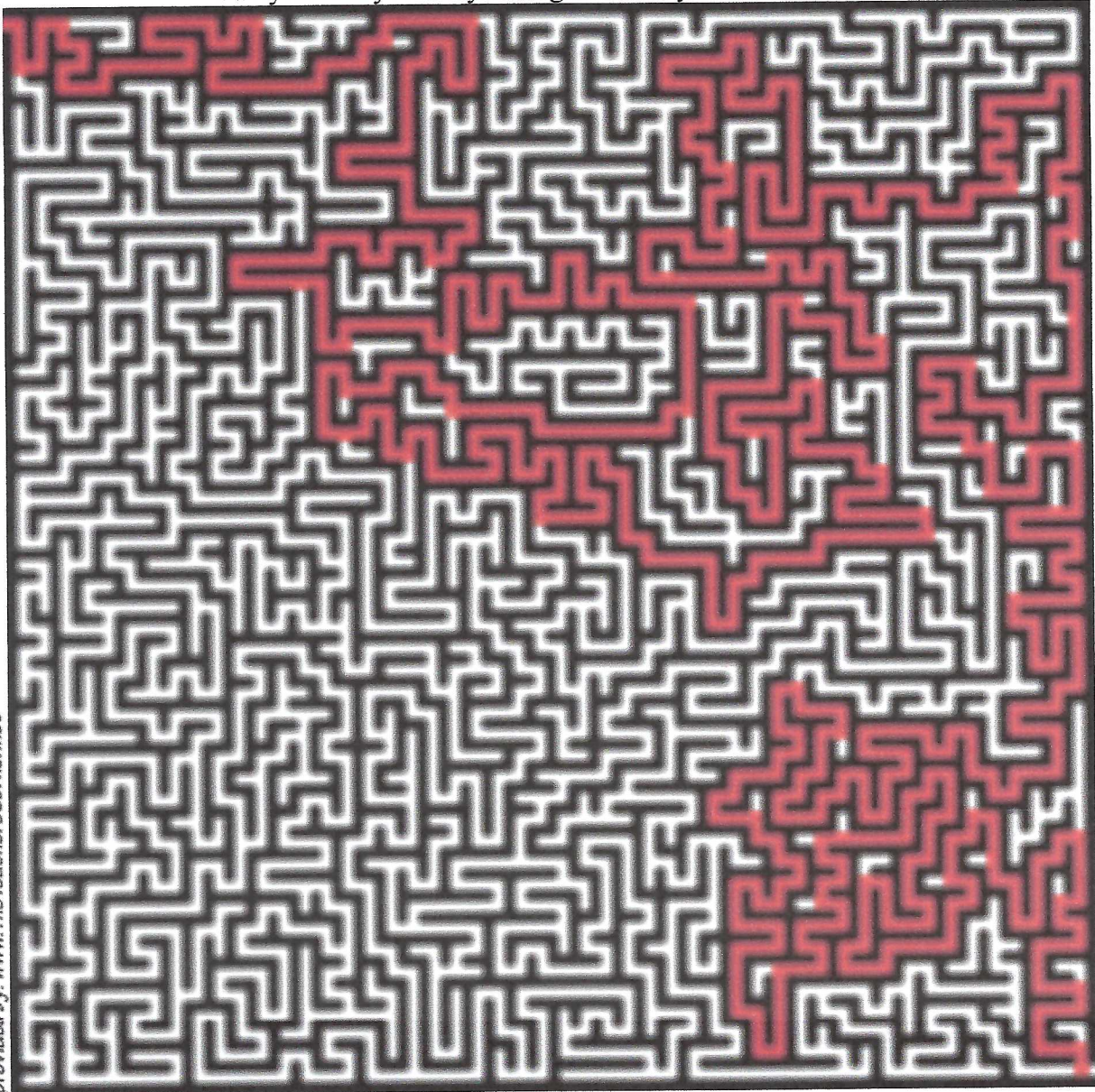
provided by: www.TheTeachersCorner.net

TheTeachersCorner.net

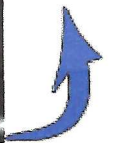


MAZE CRAZE

Can you find your way through the crazy maze below?



provided by: www.TheTeachersCorner.net



Brain Teasers

Please try to solve the problems below. Let your mind go and use your creative thinking skills! Good Luck!
Score by the number right.

1. You are a cyclist in a cross-country race. Just before the crossing finish line you overtake the person in second place! What place did you finish in?
.....
2. In a year there are 12 months. 7 months have 31 days. How many months have 28 days?
.....
3. A plane crashes on the border of the U.S. and Canada. Where do they bury the survivors?
.....
4. I do not have any special powers, but I can predict the score of any football game before it begins. How can I do this?
.....
5. You are on the bank of a river. You have to get a fox, a hen, and corn to the other side of the river. If left alone, the fox will eat the hen, and the hen will eat the corn if left alone. The boat is only big enough to take you and one other three to the other side.

How do you get all 3 across intact?
.....
6. Please add the following numbers in your head.
Start with 1000.
Add 40
Add 1000
Add 30
Add 1000
Add 20
Add 1000
Add 10
Write down your answer.
.....
7. In baseball, how many outs are there in an inning?
.....
8. I have 2 U.S. coins that total 55 cents. One of them is not a nickel. What are the 2 coins?
.....
9. What are the next 3 letters in the following sequence?
J, F, M, A, M, J, J, A, __, __, __
.....
10. You are in a room that has 3 switches and a closed door. The switches control 3 light bulbs on the other side of the door. Once you open the door, you may never touch the switches again.

How can you definitively tell which switch is connected to each of the light bulbs?
.....
11. Jimmy's mother had 4 children. She named the first Monday. Named the second Tuesday. The third is named Wednesday. What is the name of the fourth child?
.....
12. You are driving a bus. At the first stop, 2 women get on. The second stop, 3 men get on and 1 woman gets off. Third stop, 3 kids and their mom get on, and a man gets off. The bus is grey, and it is raining outside. What color is the bus drivers hair?
.....

13. Before Mt. Everest was discovered, what was the highest mountain in the world?
-
14. Which is heavier? A pound of feathers, or a pound of rocks?
-
15. Which came first, the chicken or the egg?
-
16. I left my campsite and hiked south for 3 miles. Turned east and hiked for 3 miles. Then turned north and hiked for 3 miles, at which time I came upon a bear inside my tent eating my food!
- What color was the bear?
-
17. A man lives on the fifteenth floor of an apartment building. Every morning he takes the elevator down to the lobby and leaves the building. In the evening, he gets into the elevator, and, if there is someone else in the elevator, or if it was raining that day, he goes back to his floor directly. Otherwise, he goes to the tenth floor and walks up five flights of stairs to his apartment. Can you explain why he does this?
-
18. Crime Scene: A large wooden box was built with one door. The door was locked from the inside, and then nailed shut from the inside. The police break into the room. In the middle of the room there is a dead man hanging from the ceiling, his feet are 3 feet off the ground. The only other thing in the room is a hammer lying in a puddle of water. Can you explain what happened?
-
19. Alex wants to go home but can't, because the man in the mask is waiting for him. What is going on?
-
20. Your sock drawer contains 24 white socks and 30 black socks. The lights in your room are off, so you cannot see the color of the socks. How many socks must you grab to ensure to have at least one matching pair?
-
21. You are in a cookie factory, and need to make a huge batch of chocolate chip cookies. The recipe calls for exactly 4 cups of sugar. Problem is that you have two buckets. One is 5 cups, the other is 3 cups. Using these buckets, can you measure exactly 4 cups of sugar? How?
-
22. A man is the owner of a winery who recently passed away. In his will, he left 21 barrels (seven of which are filled with wine, seven of which are half full, and seven of which are empty) to his three sons. However, the wine and barrels must be split so that each son has the same number of full barrels, the same number of half-full barrels, and the same number of empty barrels. Note that there are no measuring devices handy. How can the barrels and wine be evenly divided?
-
23. An Arab sheik is old and must will his fortune to one of his two sons. He makes a proposition. His two sons will ride their camels in a race, and whichever camel crosses the finish line LAST will win the fortune for its owner. During the race, the two brothers wander aimlessly for days, neither willing to cross the finish line. In desperation, they ask a wise man for advice. He tells them something; then the brothers leap onto the camels and charge toward the finish line. What did the wise man say?
-
24. You have a 3 gallon jug and a 5 gallon jug. You need to measure out exactly 7 gallons of water. How can you do it?
-
25. A man is on a game show. He is presented with two doors, one on the left, and one on the right. Behind one is 2 million dollars, and behind the other is a donkey. Choose the correct door to win the prize. There are also two men in front of the doors, and they know which door leads to the millions. One wears a black hat, the other wears a white hat.

The host explains that one of the men is a liar, and will always lie, and the other man will always tell the truth - but you don't know which is which.

You can ask only one of the men only one question. What is the question, and which man do you ask to ensure you win the money?

26. You and two friends rent a hotel room that costs \$30, so you put in \$10 each. Later that night, the owner of the hotel realizes he has overcharged you so he sends the bellhop with \$5. The bellhop steals \$2 and returns \$1 to each of you.

So you have each now paid \$9. $\$9 \times 3 = \27 . The bellhop stole \$2. That equals \$29 - what happened to the last dollar?

27. Three men are captured by cannibals in the jungle. The men are given one chance to escape with their lives. The men are lined up and bound to stakes such that one man can see the backs of the other two, the middle man can see the back of the front man, and the front man can't see anybody. The men are shown five hats, three of which are black and two of which are white. Then the men are blindfolded, and one of the five hats is placed on each man's head. The remaining two hats are hidden away. The blindfolds are removed. The men are told that if just one of the men can guess what hat he's wearing, they may all go free. Time passes. Finally, the front man, who can't see anyone, correctly guesses the color of his hat. What color was it, and how did he guess correctly?

28. A man is looking at a photograph of someone. His friend asks who it is. The man replies, "Brothers and sisters, I have none. But that man's father is my father's son." Who was in the photograph?

29. What words are pronounced differently by merely capitalizing the first letter?

30. What can run but never walks, has a mouth but never speaks, has a head but never weeps, and has a bed but never sleeps?

31. A man left home running. He ran a ways and then turned left, ran the same distance and turned left again, ran the same distance and turned left again. When he got home there were two masked men. Who were they?

32. What is full of holes but can still hold water?

33. Your dad tells you that he will pay you \$6.00 an hour for the 6 seconds that you take to wash your hands before dinner.

How much did you make for washing your hands?

Brain Teasers

Please try to solve the problems below. Let your mind go and use your creative thinking skills! Good Luck!
Score by the number right.

1. You are a cyclist in a cross-country race. Just before the crossing finish line you overtake the person in second place! What place did you finish in?
Answer: Second Place. If you pass the person in second, you take second place, and they become third.

2. In a year there are 12 months. 7 months have 31 days. How many months have 28 days?
Answer: They all do.

3. A plane crashes on the border of the U.S. and Canada. Where do they bury the survivors?
Answer: You don't bury the SURVIVORS!

4. I do not have any special powers, but I can predict the score of any football game before it begins. How can I do this?
Answer: I can predict the score BEFORE it begins. Well, the score before any football game is always zero to zero!

5. You are on the bank of a river. You have to get a fox, a hen, and corn to the other side of the river. If left alone, the fox will eat the hen, and the hen will eat the corn if left alone. The boat is only big enough to take you and one other three to the other side.

How do you get all 3 across intact?

Answer: First take the hen across. Leave the hen.
Go back and get the fox. Take the fox to the other side. Leave the fox there, but take the hen with you back to get the corn.
Leave the hen and take the corn to the other side.
Drop the corn off with the fox, then go back to get the hen.
Bring the hen to the other side.
All 3 make it fully intact!

6. Please add the following numbers in your head.
Start with 1000.
Add 40
Add 1000
Add 30
Add 1000
Add 20
Add 1000
Add 10
Write down your answer.
Answer: Many will get 5000. But the actual answer is 4100!

7. In baseball, how many outs are there in an inning?
Answer: 6. 3 for each team.

8. I have 2 U.S. coins that total 55 cents. One of them is not a nickel. What are the 2 coins?
Answer: A fifty-cent piece, and a nickel. I said 'one is not a nickel', but the other one is!

9. What are the next 3 letters in the following sequence?

J, F, M, A, M, J, J, A, __, __, __

Answer: S, O, N

The sequence is first letter of the months of the year. September, October and November are the next in the sequence.

10. You are in a room that has 3 switches and a closed door. The switches control 3 light bulbs on the other side of the door. Once you open the door, you may never touch the switches again.

How can you definitively tell which switch is connected to each of the light bulbs?

Answer: Turn on the first 2 switches. Leave them on for 5 minutes. Once 5 minutes has passed, turn off the second switch, leaving one switch on. Now go through the door. The light that is still on is connected to the first switch, whichever of the other two is warm to the touch is connected to the second switch. The bulb that is cold is connected to the switch that was never turned on!!

11. Jimmy's mother had 4 children. She named the first Monday. Named the second Tuesday. The third is named Wednesday. What is the name of the fourth child?

Answer: Jimmy. "JIMMY'S MOTHER had 4 children"!

12. You are driving a bus. At the first stop, 2 women get on. The second stop, 3 men get on and 1 woman gets off. Third stop, 3 kids and their mom get on, and a man gets off. The bus is grey, and it is raining outside. What color is the bus drivers hair?

Answer: Whatever color your hair is! Remember, you are the bus driver!

13. Before Mt. Everest was discovered, what was the highest mountain in the world?

Answer: Mt. Everest. It was still the highest in the world - it just hadn't been discovered yet!

14. Which is heavier? A pound of feathers, or a pound of rocks?

Answer: Neither. Both weigh a pound!

15. Which came first, the chicken or the egg?

Answer: The egg. Dinosaurs laid eggs far before there were chickens!

16. I left my campsite and hiked south for 3 miles. Turned east and hiked for 3 miles. Then turned north and hiked for 3 miles, at which time I came upon a bear inside my tent eating my food!

What color was the bear?

Answer: White. The only place you can hike 3 miles south, then east for 3 miles, then north for 3 miles and end up back at your starting point is the North Pole. There are only polar bears in the north pole, and they are white!

17. A man lives on the fifteenth floor of an apartment building. Every morning he takes the elevator down to the lobby and leaves the building. In the evening, he gets into the elevator, and, if there is someone else in the elevator, or if it was raining that day, he goes back to his floor directly. Otherwise, he goes to the tenth floor and walks up five flights of stairs to his apartment. Can you explain why he does this?

Answer: The man is a dwarf. He can't reach the upper elevator buttons, but he can ask people to push them for him. He can also push them with his umbrella.

18. Crime Scene: A large wooden box was built with one door. The door was locked from the inside, and then nailed shut from the inside. The police break into the room. In the middle of the room there is a dead man hanging from the ceiling, his feet are 3 feet off the ground. The only other thing in the room is a hammer lying in a puddle of water. Can you explain what happened?

Answer: A highly depressed man with a flair for the dramatic decided to kill himself. So he built a large wooden box with one door. Strung some rope through the top and made a noose. He then got a 3x3 block of ice, and put it below the rope. After nailing the door shut from the inside, he stood on the block of ice, put the noose around his neck and jumped off. Hours later the police find him hanging with only a puddle of water and a hammer in the room.

19. Alex wants to go home but can't, because the man in the mask is waiting for him. What is going on?
Answer: A baseball game is going on. The base-runner sees the catcher waiting at home plate with the ball, so decides to stay at third base to avoid being tagged out.
20. Your sock drawer contains 24 white socks and 30 black socks. The lights in your room are off, so you cannot see the color of the socks. How many socks must you grab to ensure to have at least one matching pair?
Answer: Three. In the worst case, the first two socks you take out will consist of one black sock and one white sock. The next sock you take out is guaranteed to match one or the other.
21. You are in a cookie factory, and need to make a huge batch of chocolate chip cookies. The recipe calls for exactly 4 cups of sugar. Problem is that you have two buckets. One is 5 cups, the other is 3 cups. Using these buckets, can you measure exactly 4 cups of sugar? How?
Answer: This is possible, and there are 2 ways to do it:
Solution 1: Fill the 3 cup bucket, pour it into the 5 cup bucket. Fill the 3 cup bucket again, and pour it into the 5 cup bucket until the 5 cup bucket is full. That will leave exactly 1 cup of sugar in the 3 cup bucket. Dump out the 5 cup bucket, and dump the 1 cup from the 3 cup bucket into the empty 5 cup bucket. This leaves 1 cup in the 5 cup bucket. Now fill the 3 cup again and add it to the 5 cup bucket. Now you have exactly 4 cups of sugar in the 5 cup bucket!
Solution 2: Fill the 5 cup bucket. Pour it into the 3 cup bucket. This leaves 2 cups in the 5 cup bucket. Dump out the 3 cup bucket. Now pour the 2 cups from the 5 cup into the 3 cup. Refill the 5 cup. Now pour the 5 cup into the 3 cup until the 3 cup is full. That will leave exactly 4 cups in the 5 cup bucket!
22. A man is the owner of a winery who recently passed away. In his will, he left 21 barrels (seven of which are filled with wine, seven of which are half full, and seven of which are empty) to his three sons. However, the wine and barrels must be split so that each son has the same number of full barrels, the same number of half-full barrels, and the same number of empty barrels. Note that there are no measuring devices handy. How can the barrels and wine be evenly divided?
Answer: Two half-full barrels are dumped into one of the empty barrels. Two more half-full barrels are dumped into another one of the empty barrels. This results in nine full barrels, three half-full barrels, and nine empty barrels. Each son gets three full barrels, one half-full barrel, and three empty barrels.
23. An Arab sheik is old and must will his fortune to one of his two sons. He makes a proposition. His two sons will ride their camels in a race, and whichever camel crosses the finish line LAST will win the fortune for its owner. During the race, the two brothers wander aimlessly for days, neither willing to cross the finish line. In desperation, they ask a wise man for advice. He tells them something; then the brothers leap onto the camels and charge toward the finish line. What did the wise man say?
Answer: The rules of the race were that the owner of the camel that crosses the finish line last wins the fortune. The wise man simply told them to switch camels.
24. You have a 3 gallon jug and a 5 gallon jug. You need to measure out exactly 7 gallons of water. How can you do it?
Answer: Fill the 5 gallon jug, pour it into the 3 gallon jug until the 3 gallon is full, leaving 2 gallons in the 5 gallon jug. Now pour the 3 gallon jug out. Pour the remaining 2 gallons from the 5 gallon into the empty 3 gallon jug. Now fill the 5 gallon from the faucet. You now have exactly 7 gallons.
25. A man is on a game show. He is presented with two doors, one on the left, and one on the right. Behind one is 2 million dollars, and behind the other is a donkey. Choose the correct door to win the prize. There are also two men in front of the doors, and they know which door leads to the millions. One wears a black hat, the other wears a white hat.

The host explains that one of the men is a liar, and will always lie, and the other man will always tell the truth - but you don't know which is which.

You can ask only one of the men only one question. What is the question, and which man do you ask to ensure you win the money?

Answer: You ask either man the following question: "If I asked the other guy which door has the money,

what would he say?", then choose the opposite door.

Work it out: If you ask the question to the liar, he will lie about the 'correct' answer, so you must choose the opposite door. If you ask the truth teller, he will tell the truth about the lie, so you can choose the opposite door as well.

-
26. You and two friends rent a hotel room that costs \$30, so you put in \$10 each. Later that night, the owner of the hotel realizes he has overcharged you so he sends the bellhop with \$5. The bellhop steals \$2 and returns \$1 to each of you.

So you have each now paid \$9. $9 \times 3 = \$27$. The bellhop stole \$2. That equals \$29 - what happened to the last dollar?

Answer: The accounting method is wrong. The \$2 is actually a part of the \$27, and shouldn't be added to it as stated in the problem.

-
27. Three men are captured by cannibals in the jungle. The men are given one chance to escape with their lives. The men are lined up and bound to stakes such that one man can see the backs of the other two, the middle man can see the back of the front man, and the front man can't see anybody. The men are shown five hats, three of which are black and two of which are white. Then the men are blindfolded, and one of the five hats is placed on each man's head. The remaining two hats are hidden away. The blindfolds are removed. The men are told that if just one of the men can guess what hat he's wearing, they may all go free. Time passes. Finally, the front man, who can't see anyone, correctly guesses the color of his hat. What color was it, and how did he guess correctly?

Answer: The back man can see the hats worn by the two men in front of him. So, if both of those hats were white, he would know that the hat he wore was black. But, since he doesn't answer, he must see at least one black hat ahead of him.

After it becomes apparent to the middle man that the back man can't figure out what he's wearing, he knows that there is at least one black hat worn by himself and the front man. Knowing this, if the middle man saw a white hat in front of him, he'd know that his own hat was black, and could answer the question correctly. But, since he doesn't answer, he must see a black hat on the front man.

After it becomes apparent to the front man that neither of the men behind him can answer the question, he realizes the middle man saw a black hat in front of him. So he says, correctly, "My hat is black."

-
28. A man is looking at a photograph of someone. His friend asks who it is. The man replies, "Brothers and sisters, I have none. But that man's father is my father's son." Who was in the photograph?

Answer: His son.

-
29. What words are pronounced differently by merely capitalizing the first letter?

Answer: There are several, and there could be more:

1. job, Job
2. herb, Herb
3. polish, Polish

-
30. What can run but never walks, has a mouth but never speaks, has a head but never weeps, and has a bed but never sleeps?

Answer: A river!

-
31. A man left home running. He ran a ways and then turned left, ran the same distance and turned left again, ran the same distance and turned left again. When he got home there were two masked men. Who were they?

Answer: The catcher and the umpire.

-
32. What is full of holes but can still hold water?

Answer: A sponge.

33. Your dad tells you that he will pay you \$6.00 an hour for the 6 seconds that you take to wash your hands before dinner.

How much did you make for washing your hands?

Answer: 1 cent.