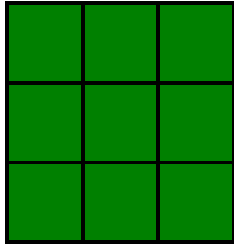




# CTSC MATHS THINKER

Grade 6 - Riddles

1. Truth or Square? How many squares can you count below?

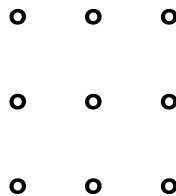


2. Give the three whole numbers for A, B and C that allow their SUM and PRODUCTS to be equal as shown below.

$$A + B + C = D$$

$$A \times B \times C = D$$

3. What can you put between 5 and 6 so that the result is GREATER than 5 but LESS than 6?  
4. Which weighs more between 1 kilogram of feathers and 1 000 grams of coal?  
5. Sam goes to the shop to buy 1 loaf of bread and 1 can of cool drink and pays R25 in total. The bread costs R1 less than the can of cool drink. What is the cost of each item?  
6. Draw 4 straight lines which crosses through all 9 dots without lifting your pen off the paper.

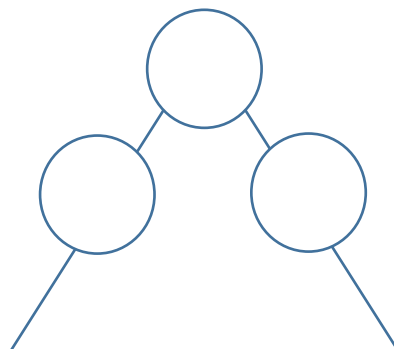


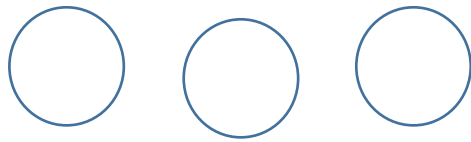
7. You have 4 coins all with heads facing up as shown below.



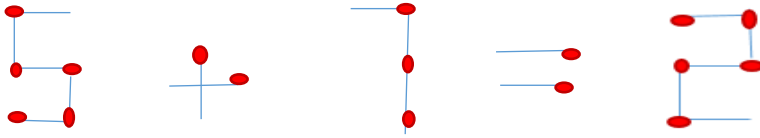
What is the minimum number of moves it would take you to have all the coins with heads facing up if, One move = turning over 3 coins

8. Using numbers 3, 4, 5, 6, 7 and 8, fill the triangle below so that each of the 3 sides of the triangle add up to 15.





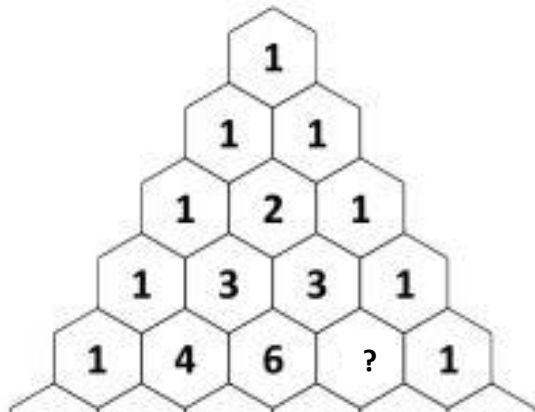
9. Move one match stick to make the following equation true:



10. There are 5 parcel boxes with only 1 parcel box occupied. Which number parcel box is the shopping bag placed in?

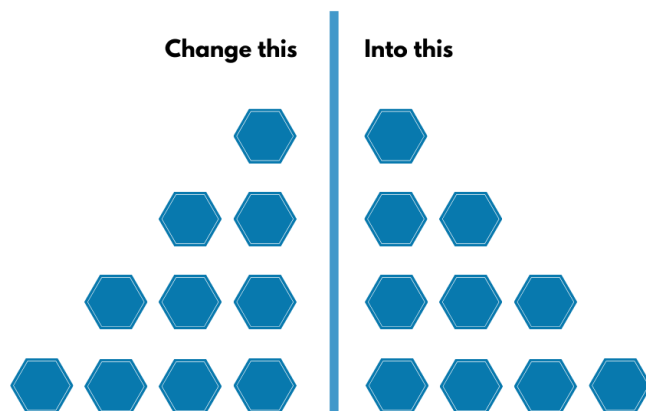


11. What is the value of the missing number in the following diagram?



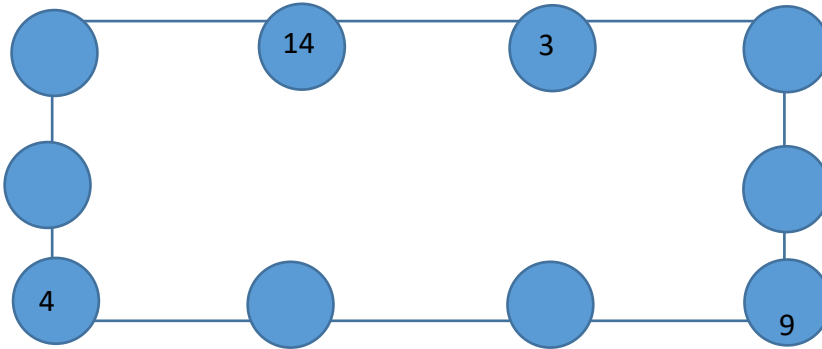
12. When Elizabeth was 10 years old, her sister Elsa was half her age. If Elsa is 40 today, how old is Elizabeth?

13. Reflective perspective:



BUT, you can only move 3 A's to do so.

14. Fill the remaining circles using only whole numbers so that all the sides of the rectangle add up to 20. You may use any number any number of times.

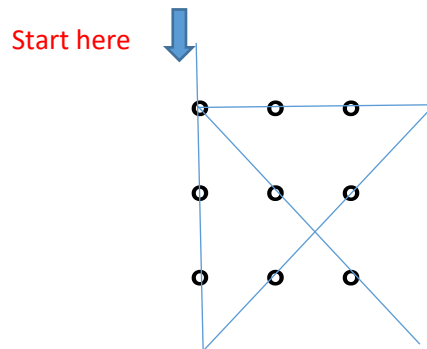


15. Henry is sent to the shop to buy 27 tomatoes. He manages to buy only 25 tomatoes. On he's journey back home, all but 9 were mashed and ruined. How many good tomatoes did Henry return home with?

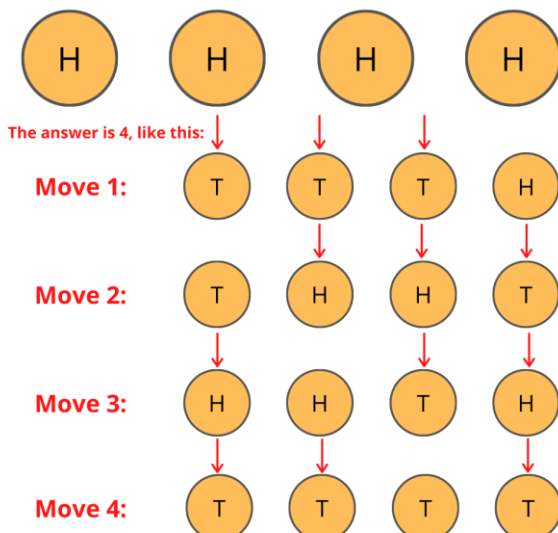
16. How many crates do you need if you have 200 pairs of shoes and each crate can hold 10 shoes?

## MEMORANDUM:

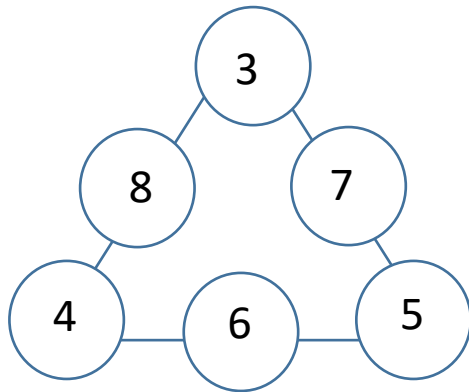
1. 14 true squares
2.  $A = 1, B=2, C=3$
3. A decimal point. This will result in 5.6
4. Neither. 1 kg is equal of 1000 g
5. Bread costs R12 and the can of cool drink costs R13.
- 6.



7.



8.



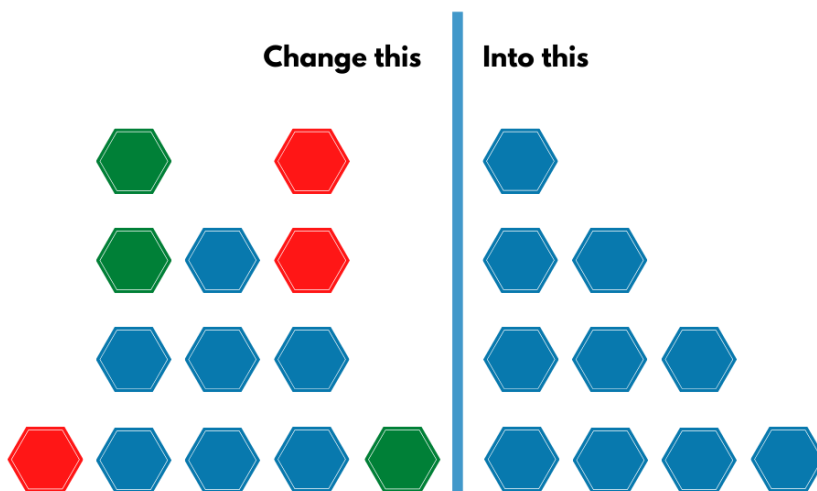
9.  $9-7=2$   
 $5-7=-2$   
 $5-7\neq 2$

10. ANS:16, Pattern rule: Add 9, then subtract 2

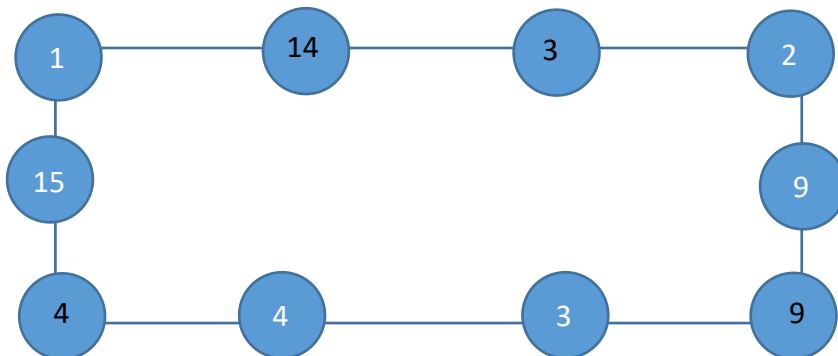
11. 4

12. 45 years old, because Elsa is 5 years younger than Elizabeth.

13. Move the 3 Red A's into the green positions.



14. The trick is to fill the top row of the rectangle first as the two missing numbers there can only be 1 and 2.



15. 9 good tomatoes.

16. 40 crates (400 shoes  $\div$  10 = 40 crates)