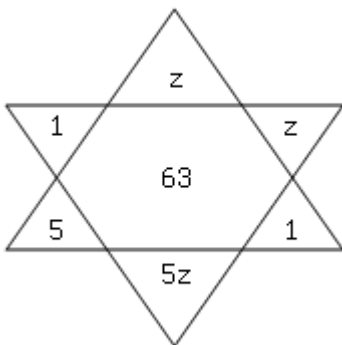
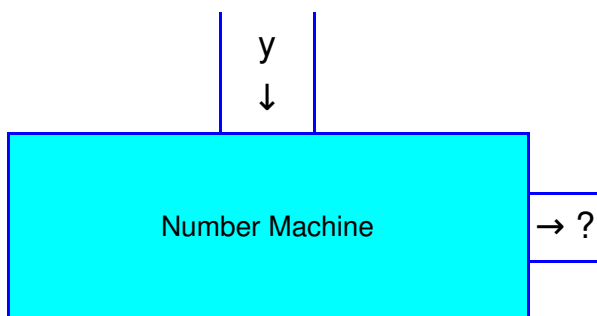


Answer the questions















- (1) If the number in the center is the sum of all other numbers, find the value of z .
(**Clarification:** In the figure, the terms containing z are products of z with single digit numbers.)




- (2) What must be subtracted from $9b^2 - 9b + 1$ to get $-9b^2 - 9b + 7$?
- (3) When a number is put into the machine shown below, a different number comes out. If 4 goes in, 12 comes out. If 5 goes in, 15 comes out. If 9 goes in, 27 comes out.



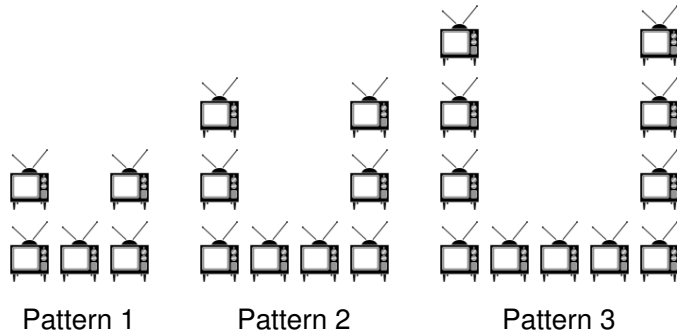
If y goes in, what number should come out?

- (4)  +  +  = R41
 +  +  +  = R52
 +  +  +  = R50
 +  +  = R42

What is the cost of one  ?

- (5) Find the value of z from the equation $(z + 5)^2 - (z + 3)^2 = 32$.
Hint : Use the identity $(a+b)(a-b) = a^2 - b^2$
- (6) Write the equation for the statement, "one third of a number added to 2 is 19".

(7) By following the shown pattern, find how many televisions will be there in "Pattern m ".



(8) Find value of x from the equation $\frac{-5x - 3}{-5} - \frac{2x + 2}{4} = \frac{-0.5x + 83.5}{-20}$.

(9) Mr. and Mrs. Pol went to a museum with their 4 children. The children were charged with half of the entrance fee. If the total fee charged was R64, what is the entrance fee for each adult?

(10) Luke wants to print some brochures for his business. If he goes for style 1, it will cost him R51.5 plus R0.25, per brochure. If he goes for style 2, it will cost him R5 plus R0.4, per brochure. For how many brochures will the price for both the styles be the same?

Choose correct answer(s) from the given choices

(11) The algebraic expression of the statement "Four-fifth of b multiplied by the difference of p and q " (Assume that p is less than q) ?

a. $\frac{4}{5} b(q - p)$

b. $\frac{4}{5} b(p/q)$

c. $\frac{4}{5} (q - bp)$

d. $\frac{4}{5} b(p - q)$

(12) If $\frac{x}{y} = \frac{3}{5}$, then identify the incorrect expression from the following.

a. $5y = 3x$

b. $\frac{x + y}{x - y} = \frac{-8}{2}$

c. $5x = 3y$

d. $\frac{x - y}{x + y} = \frac{-2}{8}$

(13) If n is an integer, which of following must be an odd integer?

a. $5n + 50$

b. $n^2 + 5$

c. $50n^2 + 5$

d. $5n$