Solutions & Winners

Kids' 'X' Word Solution

1 O	2 C	3 T	4 E	5 T	☒	6 M	7 B	8 A
9 C	R	O	C	O	10 D	I	L	E
11 T	A	M	P	E	R	☒	O	☒
12 A	F	☒	E	☒	13 Y	14 S	O	15 R
16 N	T	17 G	A	18 R	☒	19 L	D	A
E	☒	O	☒	20 O	21 W	A	☒	Z
☒	22 F	L	E	M	I	N	23 G	O
24 O	L	D	☒	25 E	N	T	E	R

Kids Challenge!

Did you find the word?
It is "DICTIONARY".

Smart kids :

1. Sravya Ainapurapu, St. Louis.
2. Sruthi Ainapurapu, St. Louis.

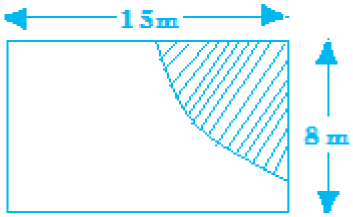
Kids' 'X'word Winners:

1. Jaya Dandamudi, Florida.
2. Nikhil Gadi, California.
3. D. Aditya, Lucknow.

Salutation to your solution! - Answers

1. 38.5 Sq. meters.

In the adjacent rectangle of size 15 x 8 meters, the cow can reach 7 meters from one corner. So the cow covers one-fourth of circle of radius 7 meters. So the area of the field, the cow can reach is $\pi r^2/4$, where r=7.
The area of the field is $(22/7) \times 7^2/4 = 38.5$ sq. m.



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2.

$$0.3\overline{7} = \frac{37 - 3}{90} = \frac{34}{90} = \frac{17}{45}$$

3. The value of expression Ax2 + Bx + C is 10 when x = 1.
When the value of x is substituted in the expression, A + B + C = 10 ……….(1)
The value of expression is 5 when x = 0, so C = 5 …………….(2)
The value of expression is 4 when x = -1, so A – B + C = 4 ……………..(3)
From 1 and 2, A + B = 5 …………….(4)
From 2 and 3, A – B = -1 ……………(5)
From 4 and 5, 2A = 4 ➔ A = 2, B =3. So the expression is $2x^2 + 3x + 5$.

4. The solution is simple. There are 5 coins in one row and 4 in the other row. We need move one coin to make two rows of 5 coins each. As shown in the figure A (next page) one coin is moved and put on the other coin. So two coins are there at one place. Now the count in both the rows (horizontal & Vertical) comes to 5.

5. The multi-story building is having floors in such a way that every floor height is 99/100th of its lower level floor height. So if the ground floor is 100 units heigh, next level will be 99 units. The ground level floor is 15ft high. If we notice the floor heights

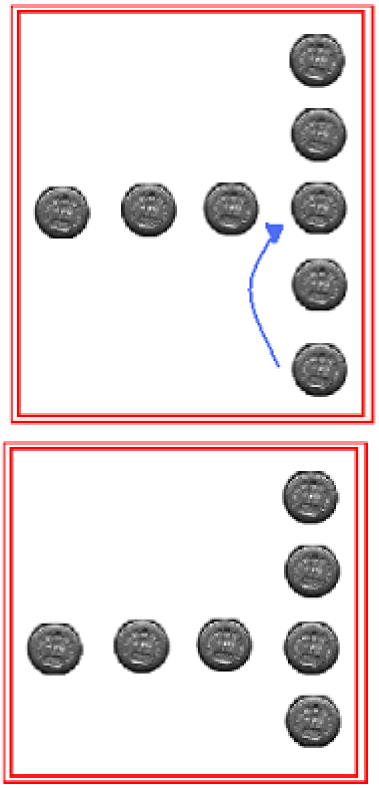

Figure A

are in Geometric Series. Suppose there are ‘n’ floors in the building. Then the height of building is $15(99/100)^n$. But the height of the building as per the problem is 59.105985ft.

So $15[1 - (99/100)^n]/(1 - 99/100) = 59.105985$

$[1 - (.99)^n]/(1 - 0.99) = 59.105985/15 = 3.940399$

$1 - (0.99)^n = 3.940399 \times 0.01$

$(0.99)^n = 1 - 0.03940399 = 0.96059601$

Thus n = 4 ➔ The building is having 5 stories.

6. $(4\sqrt{2})^n = 2^{10} \Rightarrow (2^{5/2})^n = 2^{10} \Rightarrow 2^{5n/2} = 2^{10}$

$\Rightarrow 5n/2 = 10 \Rightarrow n = 4.$

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Salutation to your solution! - Winners:

1. Vaasanti Maghapu, California.
2. Ravi Bhagavatula, Chicago.
3. T. Anoop, East Godavari, India.

Question Gallery! - We ourselves disclosing answers!!

1. The Colorado river flows in United States of America.
2. Sarojini Naidu wrote the book ‘Broken Wings’.
3. Hoover dam is located in the border of states Nevada and Arizona.

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4. The liver has many functions namely
   a) to produce substances that break down fats,
   b) convert glucose to glycogen,
   c) produce urea (the main substance of urine),
   d) make certain amino acids (the building blocks of proteins),
   e) filter harmful substances from the build (such as alcohol),
   f) storage of vitamins and minerals (Vitamins A, D, K and B12)
   g) maintain a proper level of glucose in the blood.
   h) responsible for producing cholesterol.

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5. The capital of Germany is Berlin.
6. Specific heat is the measure of the heat energy required to increase the temperature of a unit quantity of a substance by a unit of temperature.
7. One Square mile is equal to 2.56 square kilometers.
8. Symbol of Arsenic is As.
9. Gopalakrishna Gokhale was one of the founding social and political leaders during Indian Independence movement against the British Empire in India. Gokhale was a senior leader of the Indian National Congress and founder of the Servants of India Society.
10. Legume in botanical writing is a plant in the family Fabaceae (Leguminosae) which includes peas, beans, clover, alfalfa etc.

Question Gallery! – Winners : 1. Vaasanti Maghapu, California.

2. Sarada Shonti, Kakinada. 3. Ravi Bhagavatula, Chicago.

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