



### Friday, 10 January 2025

1. A shopkeeper bought 30 kg of rice at the rate of ₹ 70 per kg and 20 kg of rice at the rate of ₹ 70.75 per kg. If he mixed the two brand of rice and sold the mixture at ₹ 80.50 per kg, his gain is:

(A) ₹ 510 (B) ₹ 525  
(C) ₹ 485 (D) ₹ 450

2. A sphere is cut into two hemispheres. One of them is used as bowl. It takes 8 bowlfuls of this to fill a conical vessel of height 12 cm and radius 6 cm. The radius of the sphere (in centimetre) will be:

(A) 3 (B) 2  
(C) 4 (D) 6

3. If the altitude of an equilateral triangle is  $12\sqrt{3}$  cm, then its area (in  $\text{cm}^2$ ) would be:

(A) 12 (B) 72  
(C)  $36\sqrt{3}$  (D)  $144\sqrt{3}$

4. If the volume of a sphere is numerically equal to its surface area then its diameter is:

(A) 4 cm (B) 2 cm  
(C) 3 cm (D) 6 cm

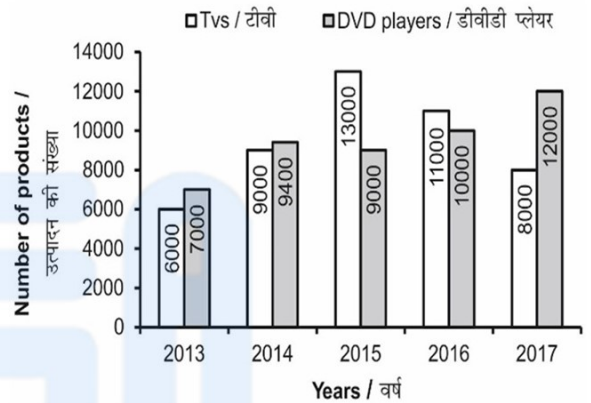
5.  $2x - ky + 7 = 0$  and  $6x - 12y + 15 = 0$  has no solution for:

(A)  $k = -4$  (B)  $k = 4$   
(C)  $k = 1$  (D)  $k = -1$

6. If  $m = -4$ ,  $n = -2$ , then the value of  $m^3 - 3m^2 + 3m + 3n + 3n^2 + n^3$  is:

(A) 124 (B) -124  
(C) 126 (D) -126

The following bar chart shows the number of the production of electronic items (TVs and DVD players) in a factory during the period from 2013 to 2017.



7. The total number of production of electronic items is maximum in the year:

(A) 2013 (B) 2014  
(C) 2015 (D) 2017

8. The ratio of production of DVD players in the year 2015 and 2017 is:

(A) 3 : 4 (B) 4 : 3  
(C) 2 : 3 (D) 1 : 4

9. The difference between averages of production of TVs and DVD players from 2013 to 2016 is:

(A) 600 (B) 700  
(C) 800 (D) 900

10. The ratio of production of TVs in the years 2013 and 2014 is:

(A) 7 : 6 (B) 6 : 7  
(C) 2 : 3 (D) 3 : 2

Directions (7-10): Study the following bar chart

1-{A} - 2-{A} - 3-{D} - 4-{D} - 5-{B} - 6-{D} - 7-{C} - 8-{A} - 9-{D} - 10-{C}