

EXAM DATE : 2-September-2016 Morning Shift

Question 1. If 20 men working 8 hours per day can complete a piece of work in 21 days. How many hours per day must 48 men work to complete the same job in 7 days?

Options:

- (A) 12
- (B) 20
- (C) 10
- (D) 15

Question 2.

ABCD is a cyclic quadrilateral. $\angle DBA = 50^\circ$ and $\angle ADB = 33^\circ$. Then the measure of $\angle BCD$ is

Options:

- (A) 83°
- (B) 80°
- (C) 75°
- (D) 60°

Question 3. A shop keeper earns a profit of 12% on selling a book at 10% discount on the printed price. The ratio of cost price to the printed price of the book is

Options:

- (A) 45:56
- (B) 50: 61
- (C) 99: 125
- (D) None of these

Question 4. The number of pupils of a class is 55. The ratio of the number of male pupils to the number of female pupils is 5: 6. The number of female pupils is

Options:

- (A) 11
- (B) 25
- (C) 30
- (D) 35

Question 5. 5% more is gained by selling a watch for Rs. 350 than by selling it for Rs. 340. The cost price of the watch is

Options:

- (A) Rs. 110
- (B) Rs. 140
- (C) Rs. 200
- (D) Rs. 250

Question 6. If 60% of the students in a school are boys and number of girls is 812, how many boys are there in the school?

Options:

- (A) 1128
- (B) 1218
- (C) 1821
- (D) 1281

Question 7. It takes eight hours for a 600 km journey, if 120 km is done by train and the rest by car. It takes 20 minutes more, if 200 km is done by train and the rest by car. The ratio of the speed of the train to that of the car is:

Options:

- (A) 3:5
- (B) 3:4
- (C) 4: 3
- (D) 4: 5

Question 8.

If $a + \frac{1}{a} = 1$, then the value of $\frac{a^2 - a + 1}{a^2 + a + 1}$ is ($a \neq 0$)

Options:

- (A) 1
- (B) -1
- (C) 0
- (D) 2

Question 9. If $m + n = 1$, then the value of $m^3 + n^3 + 3mn$ is equal to

Options:

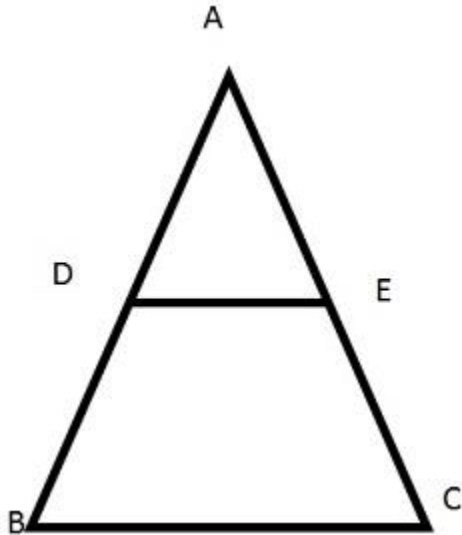
- (A) 0
- (B) 1
- (C) 2
- (D) 3

Question 10. The maximum number of common tangents that can be drawn to two disjoint circles is

Options:

- (A) 1
- (B) 2
- (C) 4
- (D) Infinitely many

Question 11. In figure, $DE \parallel BC$. If $DE = 3$ cm, $BC = 6$ cm and area of $\triangle ADE = 15$ sq cm, then the area of $\triangle ABC$ is



Options:

- (A) 75 sq cm
- (B) 45 sq cm
- (C) 30 sq cm
- (D) 60 sq cm

Question 12. If $\cos 4\theta - \sin 4\theta = 1/3$, then the value of $\tan 2\theta$ is

Options:

- (A) $1/2$
- (B) $1/3$
- (C) $1/4$
- (D) $1/5$

Question 13. If a perfect square, not divisible by 6, be divided by 6, the remainder will be

Options:

- (A) 1, 3 or 5
- (B) 1, 2 or 5
- (C) 1, 3 or 4
- (D) 1, 2 or 4

Question 14. A batsman in his 12th innings makes a score of 120, and thereby increase his average by 5. The average score after 12th innings is

Options:

- (A) 60
- (B) 55
- (C) 65
- (D) 70

Question 15.

The value of $\sqrt{-\sqrt{3} + \sqrt{3 + 8\sqrt{7} + 4\sqrt{3}}}$ is

Options:

- (A) 2
- (B) 4
- (C) ± 2
- (D) -2

Question 16.

If $x^4 + \frac{1}{x^4} = 119$, then the value of $x - \frac{1}{x}$ is

Options:

- (A) 6
- (B) 12
- (C) 11
- (D) 3

Question 17. The side BC of the ΔABC is extended to the point D. If $\angle ACD = 112^\circ$ and $\angle B = \frac{3}{4} \angle A$, then the value of $\angle B$ is

Options:

- (A) 64°
- (B) 48°
- (C) 46°
- (D) 50°

Question 18. ΔABC is a right angled triangle, the radius of its circumcircle is 3 cm and the length of its altitude drawn from the opposite vertex to the hypotenuse is 2 cm. Then the area of the triangle is

Options:

- (A) 12 sq cm
- (B) 3 sq cm
- (C) 6 sq cm
- (D) 5 sq cm

Question 19. The height of a tower is $50\sqrt{3}$ m. The angle of elevation of a tower from a distance 50 m from its feet is

Options:

- (A) 30°
- (B) 45°
- (C) 60°
- (D) 90°

Question 20. The amount of Rs. 10,000 after 2 years, compounded annually with the rate of interest being 10% per annum during the first year and 12% per annum during the second year, would be (in rupees)

Options:

- (A) 11,320
- (B) 12,000

(C) 12,320

(D) 12,500

Question 21. The value of $\tan 80^\circ \tan 10^\circ + \sin 270^\circ + \sin 20^\circ$ is $\tan 80^\circ \tan 10^\circ + \sin 270^\circ + \sin 20^\circ$

Options:

(A) 0

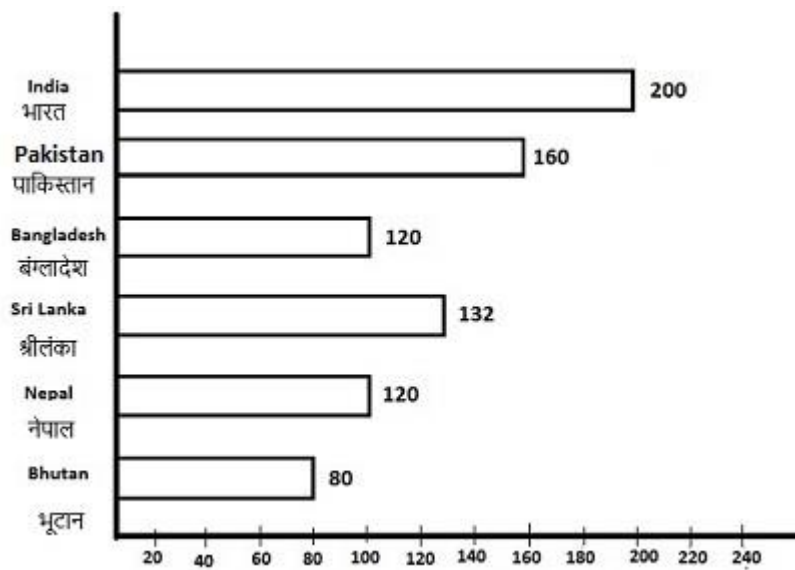
(B) 1

(C) 2

(D)

$$\frac{\sqrt{3}}{2}$$

Question 22. The bar graph given below shows the per acre yield (in kg) of different countries. Study the graph carefully and answer the questions



The average yield of the given countries is

Options:

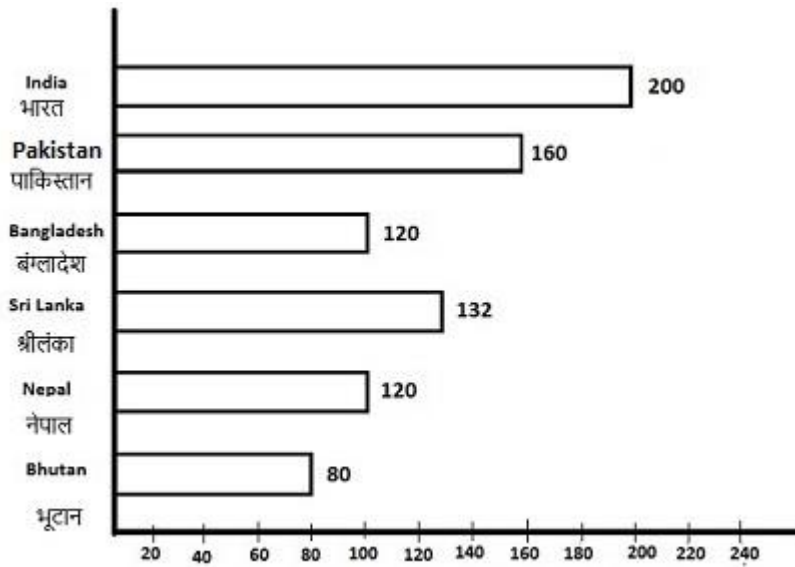
(A) $132\frac{1}{3}$

(B) $133\frac{1}{3}$

(C) $134\frac{1}{3}$

(D) $135\frac{1}{3}$

Question 23. The bar graph given below shows the per acre yield (in kg) of different countries. Study the graph carefully and answer the questions

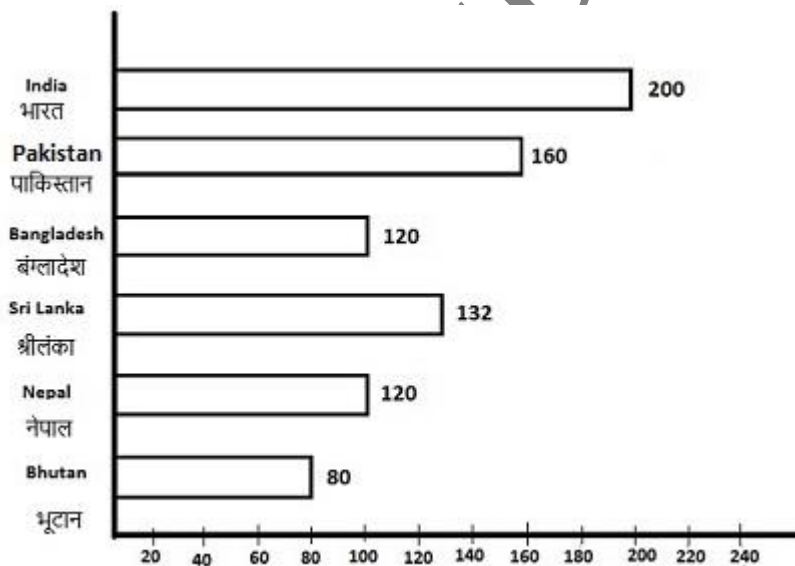


By how much percentage is India's per acre yield more than that of Pakistan's?

Options:

- (A) 20%
- (B) 25%
- (C) $33 \frac{1}{3}\%$
- (D) 35%

Question 24. The bar graph given below shows the per acre yield (in kg) of different countries. Study the graph carefully and answer the questions



Sri Lanka's yield (approximately) is what percent of total yield of all the countries?

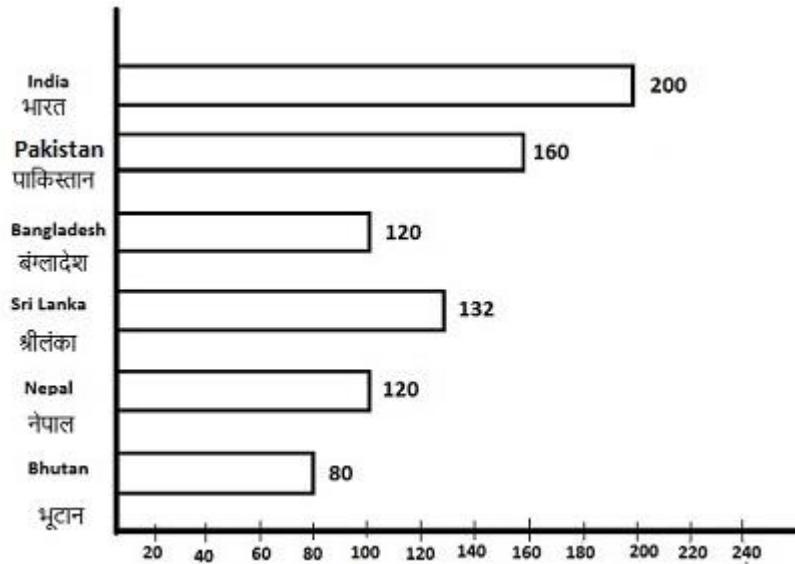
Options:

- (A) 17.8%
- (B) 16.2%

(C) 18.2%

(D) 15.4%

Question 25.The bar graph given below shows the per acre yield (in kg) of different countries. Study the graph carefully and answer the questions



Writing the yields of all countries in ascending order, the difference between the sum of yields of first three countries to that of last three countries is

Options:

(A) 200 kg

(B) 212 kg

(C) 172 kg

(D) 162 kg

Questions	Answer	Questions	Answer	Questions	Answer	Questions	Answer	Questions	Answer
1	C	2	A	3	A	4	C	5	C
6	B	7	B	8	C	9	B	10	C
11	D	12	A	13	C	14	C	15	A
16	C	17	B	18	C	19	C	20	C
21	C	22	D	23	B	24	B	25	C