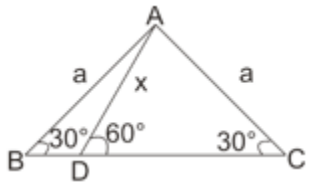
Quantitative Aptitude for RRB NTPC

Q1. What is x equal to in the figure



(a) $\frac{a}{3}$

(b) $\frac{a}{2}$

(c) $\frac{a}{\sqrt{3}}$

(d) $\frac{a}{\sqrt{2}}$

Q2. $\sqrt{12} + \sqrt{1200} + \sqrt{0.0012}$ is equal to $(\sqrt{3} = 1.73)$

(a) 38.9436

(b) 38.0946

(c) 38.5616

(d) 38.5964

Q3. If selling price of a pen is 17 times the discount offered and discount% equal to the one-third of profit%, then find the ratio of profit occurred to discount offered on article

(a) 15 : 7

(b) 7 : 15

(c) 7 : 17

(d) 17 : 7

Q4. A circular wire of 308 diameter is cut and bent to form a rectangle and a square of same area. If length of the rectangle is 176% of its breadth. Find the breadth of the rectangle?

(a) 89.63cm

(b) 84.59cm

(c) 82.34cm

(d) 92.89cm

Q5. If the perimeter of an isosceles right angled triangle is $(16\sqrt{2}+16)$ cm, then the area of the triangle is?
(a) 58 sq.cm
(b) 66 sq.cm
(c) 76 sq.cm
(d) 64 sq.cm

Q6. A sum of money becomes Rs. 8,928 in two year and Rs. 10,224 in 3 ½ year at simple Interest. Find out the rate of Interest.
(a) 9%
(b) 15%
(c) 12%
(d) 10%

Q7. A, B and C partners in a business. A, whose capital was used for 6 months claims ¼ of the total profit. B whose capital was used for 8 months claims ⅓ of the total profit. If C invested Rs. 5400 for 12 months, then what is the amount invested by A?
(a) 1800Rs.
(b) 6840 Rs.
(c) 6480 Rs.
(d) 7480 Rs.

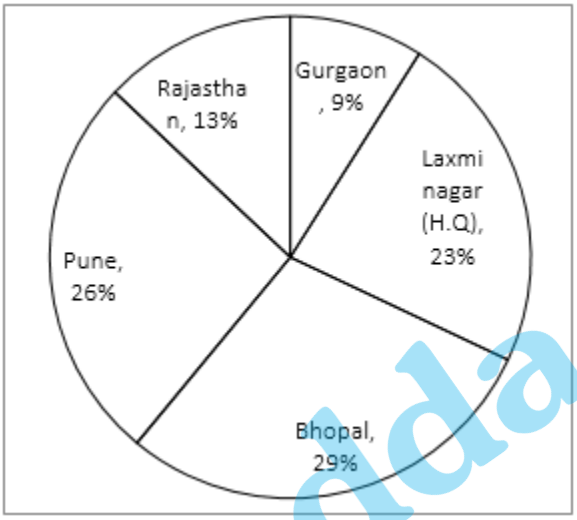
Q8. If $x^4 + x^{-4} = 2599$, then what will be the value of $x - x^{-1}$ where x>0?
(a) 7
(b) 8.5
(c) 5
(d) 4

Q9. What will be the sum of the biggest 3 digit number and smallest 4-digit number whose HCF is 23?
(a) 200
(b) 2001
(c) 1999
(d) 1998

Q10. If a product is sold at $\frac{3}{4}th$ of its selling Price there would be a loss of 16.66% Find the profit if it is sold at $\frac{6}{5}th$ of selling price.
(a) 35%
(b) 37.37%
(c) 43%
(d) 33⅓%

Q11. A right circular cone of largest volume is cut out from a solid wooden hemisphere. The remaining material is what percent of the volume of the original hemisphere?
(a) 50%
(b) 75%
(c) 66 ⅔%
(d) 33 ⅓%

Directions (12-14) : Read the following pie–chart carefully and answer the following questions.
Pie-chart shows employees percentage of company adda247.
Total 5600 employees working in different – cities.

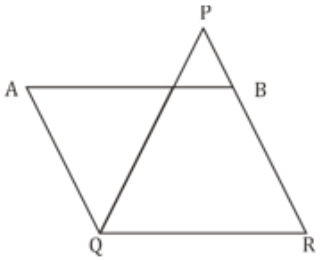


Q12. Find the ratio of average of Bhopal and Pune's employees to Gurgaon and Laxmi Nagar's employees
(a) 32 : 55
(b) 55 : 32
(c) 11 : 16
(d) 16 : 11

Q13. If some new recruitments are made in Pune and Rajasthan branch and angle become 155.04 of both. Find the number of new employee.
(a) 352
(b) 250
(c) 300
(d) 400

Q14. If company transfers $11\frac{1}{9}\%$ of Gurgaon employees in Pune. after that same percent of Pune's Employees transfer to Rajasthan find the new percent of Rajasthan's employees?
(a) 16%
(b) 12%
(c) $14\frac{2}{9}\%$
(d) $15\frac{2}{9}\%$

Q15. In the given figure, ΔPQR has sides PQ = 23 cm, QR = 24 cm and RP = 25 cm. On the base QR a parallelogram ABRQ of same area as that of ΔPQR is constructed. Find the height of parallelogram?



(a) $\sqrt{\frac{411}{4}}$

(b) $\sqrt{\frac{420}{4}}$

(c) $\sqrt{\frac{440}{4}}$

(d) $\sqrt{\frac{429}{4}}$

Q16. The greatest number of four digit which is exactly divisible by 12, 15 and 18 is -

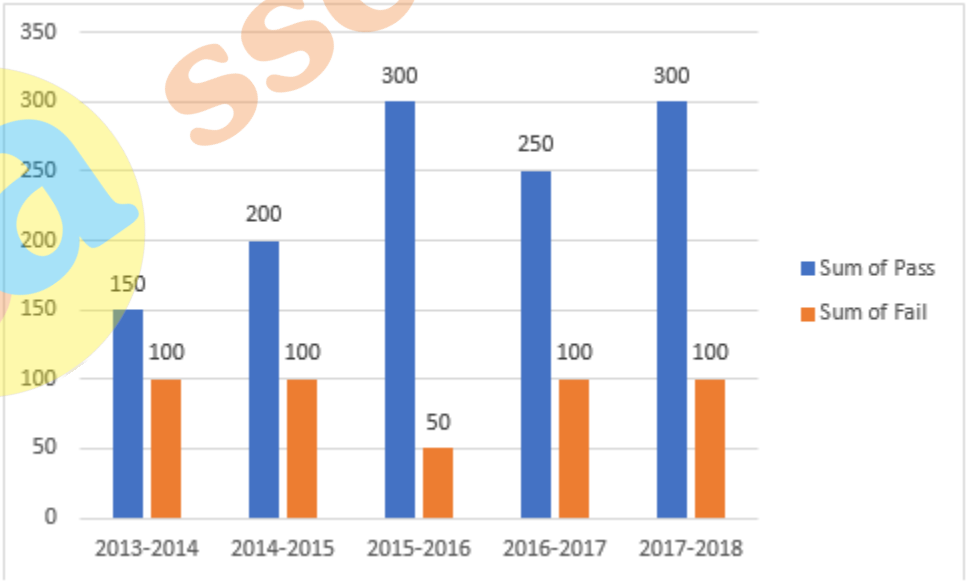
(a) 9989

(b) 9990

(c) 9900

(d) 9960

Q17. The given Bar Graph presents the result in terms of number of students in a school for the five academic years. 2013-2014 to 2017-2018.



In which year the percentage increase in the total number of students in the highest in comparison to the previous academic year?

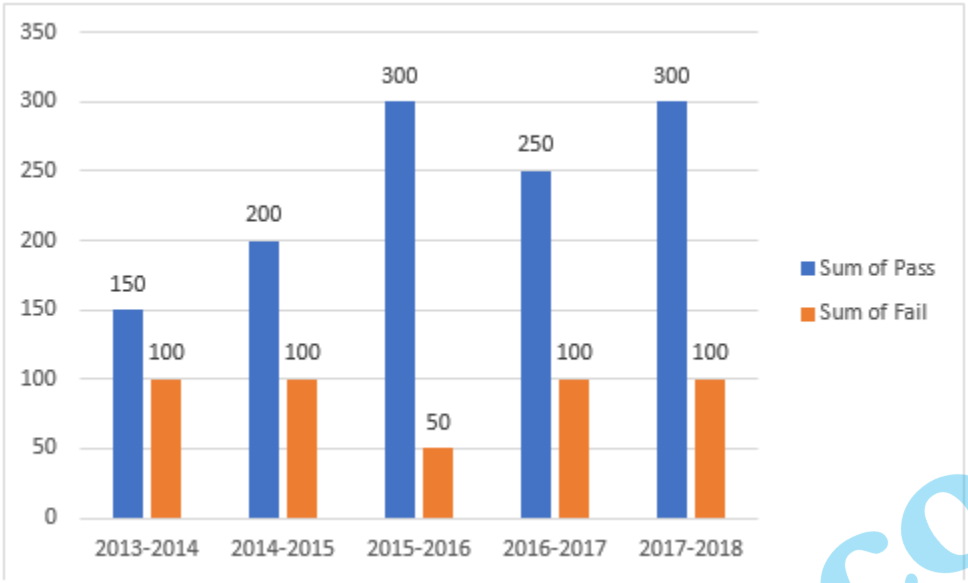
(a) 2017-2018

(b) 2015-2016

(c) 2016-2017

(d) 2014-2015

Q18. The given Bar Graph presents the result in terms of number of students in a school for the five academic years. 2013-2014 to 2017-2018.



What is the average of failed students in five academic years?

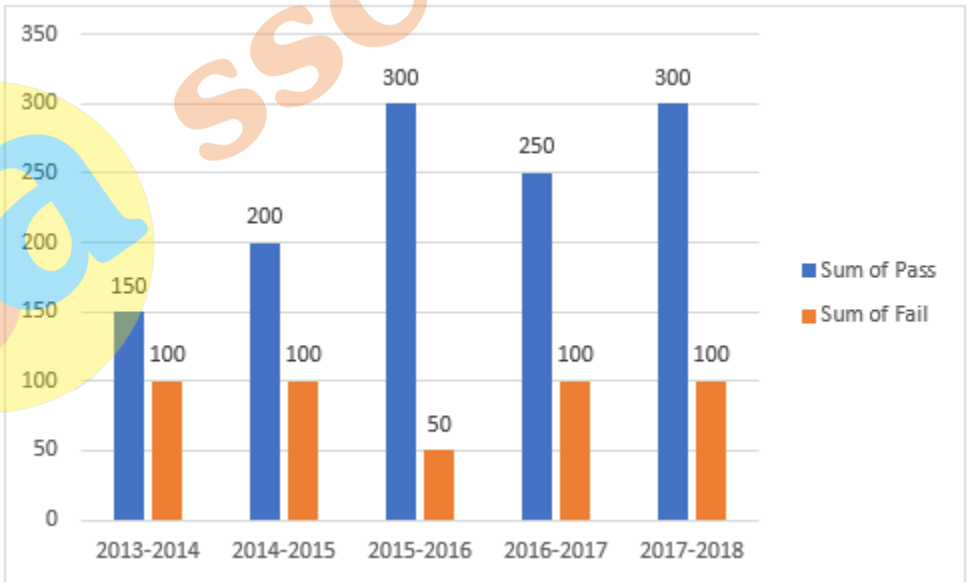
(a) 75

(b) 50

(c) 100

(d) 90

Q19. The given Bar Graph presents in results in terms of number of students in a school for five academic years. 2013-2014 to 2017-2018.



The difference between the number of students passed and those who failed is the highest in which academic year?

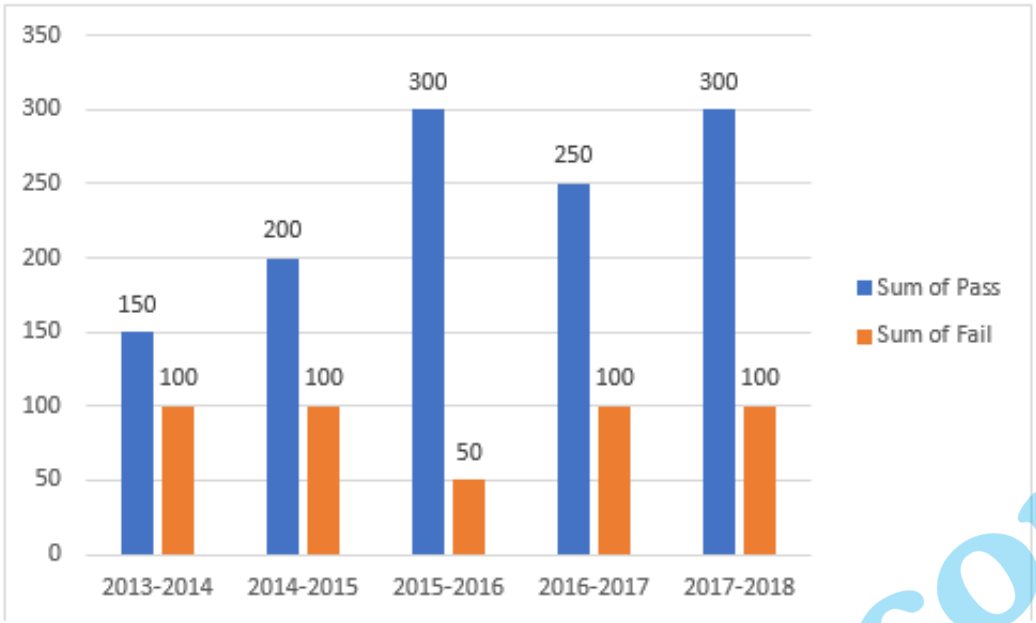
(a) 2015-2016

(b) 2014-2015

(c) 2017-2018

(d) 2016-2017

Q20. The given Bar Graph presents the result in terms of number of students for the five academic years, 2013-2014 to 2017-2018.



What is the approximate percentage of students passed during five academic years (correct to the nearest integer) ?

(a) 72%
(b) 78%
(c) 79%
(d) 73%

Q21. In a triangle ABC, side AB is equal to AC. A circle is passing through point B, touches side AC at mid point D and cuts side AB at point E. If AE= 2.5cm then find AB?

(a) 12.5 cm
(b) 10 cm
(c) 7.5 cm
(d) 5 cm

Q22. Perimeter of base of a cone is 66 cm and height is 36 cm. Find curved surface area of cone?

(a) 1237.5 cm^2
(b) 1150 cm^2
(c) 2475 cm^2
(d) 637.5 cm^2

Q23. If $\sec\theta - tan\theta = \frac{x}{y}$, then $\sin\theta$= ?

(a) $\frac{2xy}{x^2+y^2}$
(b) $\frac{x^2-y^2}{x^2+y^2}$
(c) $\frac{2xy}{x^2-y^2}$
(d) $\frac{x^2+y^2}{x^2-y^2}$

Q24. If $5\sin^2\theta+14\cos\theta= 13$, then $\tan\theta+\sec\theta=?$

(a) 2

(b) 1

(c) 3/4

(d) 3/5

Q25. $2\sin\theta - 6\sqrt{3}\tan\theta + 5 = 0$, then find $\tan 2\theta + \cos 2\theta = ?$

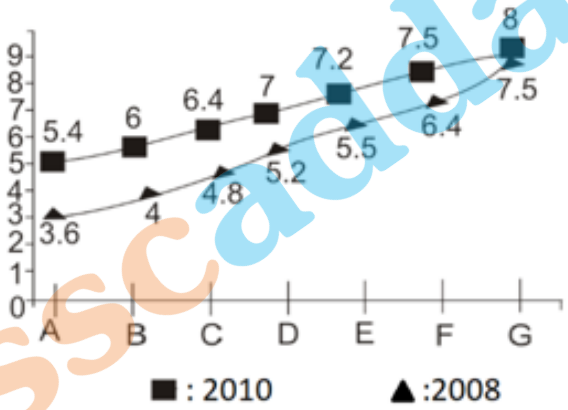
(a) $\frac{3\sqrt{3}}{2}$

(b) $\sqrt{3}+1$

(c) $\sqrt{3}+\frac{1}{2}$

(d) $2\sqrt{3}$

Directions (26-28) Following line-graph shows the population of seven cities (in lakh) and the table shows the percentage of literate population in these cities.



	% Literate 2008	% Literate 2010
A	57.80%	62.30%
B	63.10%	68.60%
C	59.20%	66.40%
D	64.50%	73.20%
E	67.70%	71.00%
F	65.80%	74.50%
G	68.90%	73.30%

Q26. What is the total literate population of city A in the year 2008 and 2010 together (in lakh) ?

(a) 5.126

(b) 5.248

(c) 5.312

(d) 5.445

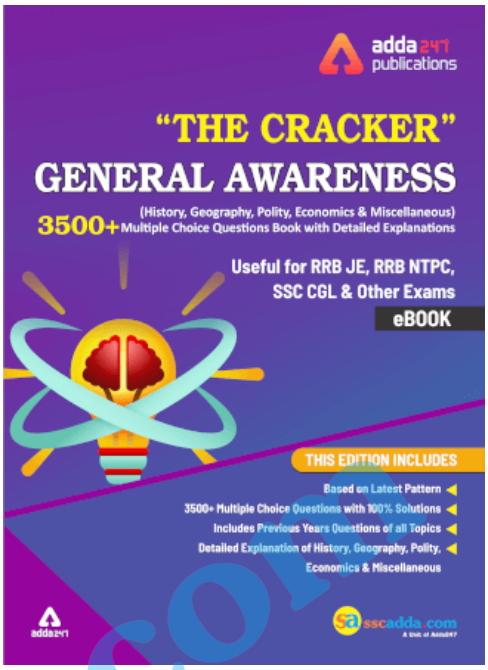
Q27. What is the difference between the total illiterate population of city G and city F in the year 2008? (in lakh)

(a) 0.1437

(b) 0.1487

(c) 0.1527

(d) 0.1567



Q28. The literate population of city E in the year 2010 is approximately what percentage more than its literate population in 2008?

(a) 27.5%

(b) 32%

(c) 34.8%

(d) 37.3%

Q29. 10 years ago the average age of a family of 4 members was 24 yrs. Three children have been born and the average age of the family is 22 yrs. today. What are the present ages of children, if two children are identical twins and differ by three years from the younger one.

(a) 7, 7, 4

(b) 8, 8, 11

(c) 8, 5, 5

(d) 5, 5, 2

Q30. A certain sum of money is invested for 3 years. If rate of interest is 12.5%, 10% and 25% per annum compounded annually respectively. If the total compound interest in 3 year is Rs. 1750. Find the principal.

(a) 3400

(b) 3265

(c) 3200

(d) 3464