

IMMACULATE CONCEPTION COLLEGE
170, M.M. WAY, BENIN CITY

ENTRANCE EXAMINATIONS FOR 2007/2008 ACADEMIC SESSION

SUBJECT: MATHEMATICS

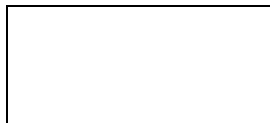
CLASS: JSS.1

TIME: 1 HOUR

SECTION A: OBJECTIVE (60 marks)

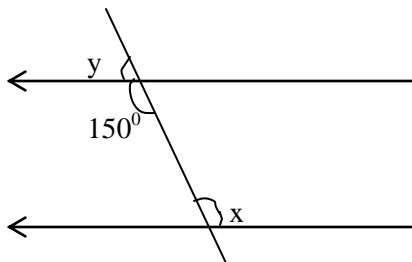
INSTRUCTION: Attempt all questions in this section.

1. How many thousands are there in 965204? (a) 960000 (b) 90000 (c) 9000 (d) 965 (e) 90
2. What will be the remainder, when 620 is divided by 12? (a) 6 (b) 8 (c) 10 (d) 40 (e) 51
3. Express 11.25kg in g. (a) 8,250g (b) 11,250g (c) 12,250g (d) 14,250g (e) 15,250g
4. How many lines of symmetry has the shape below?



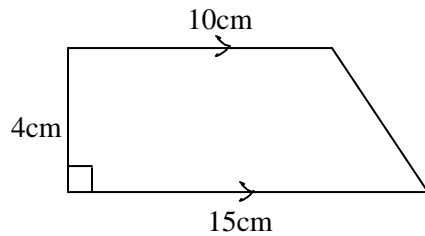
(a) 2 (b) 3 (c) 4 (d) 4 (e) 8

5. Convert 40°C to $^{\circ}\text{F}$ if ($1^{\circ}\text{C} = 1.8^{\circ}\text{F}$) (a) 100°F (b) 90°F (c) 80°F (d) 72°F (e) 50°F
6. If $\frac{8}{5} = \frac{48}{x}$, what is the value of "x"? (a) 64 (b) 50 (c) 40 (d) 30 (e) 25
7. Find the value of the lettered angles in this figure.

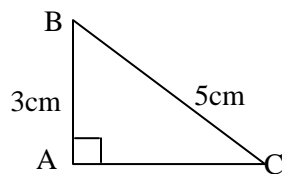


- (a) 120° and 150° (b) 120° and 60° (c) 150° and 30° (d) 140° and 60° (e) 125° and 65°
8. Out of 6873 candidates who sat for an examination, 5739 passed. How many failed. (a) 134 (b) 1034 (c) 1134 (d) 2134 (e) 3334
9. Find the area of a circle whose diameter is 14cm. (a) 308cm^2 (b) 288cm^2 (c) 172cm^2 (d) 170cm^2 (e) 154cm^2
10. What is the smallest number which can be divided exactly by 24, 40 and 42 with a remainder of 1 (a) 741 (b) 840 (c) 841 (d) 940 (e) 941
11. A bag of rice costs N120.00, a woman made a profit of 20% on a bag. How much did she sell the bag? (a) N144.00 (b) 135.00 (c) 125.00 (d) N105.00 (e) N95.00
12. Adams tossed a fair dice 20 times and the number that showed up were as follows: 4, 5, 6, 3, 2, 4, 6, 2, 3, 3, 4, 1, 4, 6, 6, 4, 3, 6, 4, 4. Find the Mode. (a) 2 (b) 3 (c) 4 (d) 5 (e) 6
13. 12 men take 8 days to dig a trench. How many men are needed to dig it in 6 days? (a) 8 men (b) 16 men (c) 32 men (d) 56 men (e) 80 men.
14. A cyclist started a journey at 7.30am and returned at 12.30pm. How long does the journey take her? (a) 2hrs (b) 4hrs (c) 5hrs (d) 8hrs (e) 10hrs.
15. Share 27 oranges between James and Grace in ratio 4:5 (a) 6:12 (b) 8:12 (c) 9:12 (d) 10:12 (e) 12:15

16. Find the H.C.F. of 24, 27 and 33 (a) 3 (b) 4 (c) 11 (d) 15 (e) 18
 17. Find the value of the letter x if $72 = 80 - x$. (a) 152 (b) 9 (c) 8 (d) 12 (e) 6
 18. A man's age in 1950 is 43. In what year was he born? (a) 1907 (b) 1909 (c) 1917 (d) 1991 (e) 1992
 19. Find the area of the figure below:

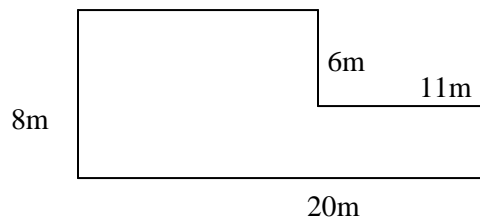


- (a) 246cm^2 (b) 150cm^2 (c) 50cm^2 (d) 45cm^2 (e) 100cm^2
 20. In the figure below, $AB = 3\text{cm}$ and $BC = 5\text{cm}$. Find the size of AC



- (a) $3\frac{1}{2}\text{ cm}$ (b) 6cm (c) $4\frac{1}{2}\text{ cm}$ (d) 4cm (e) 9cm
 21. How many 0.05 are contained in 135? (a) 2.5 (b) 250 (c) 62.5 (d) 6.5 (e) 2700
 22. What is the value of $6.01 - 1.06$? (a) 7.07 (b) 5.94 (c) 0.495 (d) 7.70 (e) 4.95
 23. The value of $1.8 \div 0.03$ is ----- (a) 0.6 (b) 6.0 (c) 16 (d) 60 (e) 66
 24. $7\frac{1}{2}$ when multiplied by $\frac{2}{15}$ gives (a) 1 (b) 0 (c) 15 (d) 2 (e) 7
 25. $7 + 3 + 2$ is the same as (a) $(7 - 3) + 2$ (b) $(7 + 3) + 2$ (c) $2 - 3 + 7$ (d) $7 - (2 + 3)$ (e) $(7 + 3) - 2$
 26. A Housewife spent $\frac{3}{7}$ of her money in the market and $\frac{1}{2}$ of the remainder in the shop. The fraction of her money left is (a) $\frac{1}{7}$ (b) $\frac{2}{7}$ (c) $\frac{5}{7}$ (d) $\frac{3}{14}$ (e) $\frac{1}{14}$
 27. 30% of ~~N~~150 is (a) ~~N~~30.00 (b) ~~N~~50.00 (c) ~~N~~45.00 (d) ~~N~~120.00 (e) ~~N~~150.00
 28. Simplify $\frac{1}{6} + \frac{5}{12} + \frac{3}{8}$ (a) $\frac{9}{26}$ (b) $\frac{15}{18}$ (c) $\frac{15}{96}$ (d) $\frac{21}{24}$ (e) $\frac{23}{24}$

Use the diagram below to answer questions 29 and 30



29. The perimeter of figure above is (a) 58m (b) 46m (c) 39m (d) 56m (e) 54m
 30. The area of the above figure is (a) 94m^2 (b) 49m^2 (c) 109m^2 (d) 91m^2 (e) 19m^2
 31. Arrange $\frac{7}{8}$, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{3}$ in ascending order. (a) $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$, $\frac{7}{8}$ (b) $\frac{7}{8}$, $\frac{1}{3}$, $\frac{1}{2}$, $\frac{1}{4}$ (c) $\frac{7}{8}$, $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ (d) $\frac{1}{3}$, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{7}{8}$ (e) $\frac{7}{8}$, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{3}$
 32. $\frac{147}{17}$ when expressed as a mixed fraction is (a) $17\frac{7}{17}$ (b) $1\frac{1}{7}$ (c) $8\frac{11}{17}$ (d) $12\frac{17}{19}$ (e) $1\frac{7}{17}$
 33. 0.07 as a percentage is (a) 93% (b) 17% (c) 7% (d) 1.7%

34. N600 was borrowed at an interest rate of 7% per annum. The simple interest for 3 years is (a) ₦1008 (b) ₦1800 (c) ₦1080 (d) ₦108 (e) ₦126
35. Solve $3x - 4 = 8 + x$. The value of x is (a) 3 (b) 8 (c) 6 (d) 12 (e) 15
36. The cube of 4 added to the cube root of 27 is (a) 67 (b) 31 (c) 35 (d) 12 (e) 108
37. What is the value of $1^2 + 2^2 + \sqrt{25}$ (a) 10 (b) 11 (c) 12 (d) 13 (e) 15
38. The area of a circle is $38\frac{1}{2} \text{ m}^2$. Its radius is (a) 7m (b) $3\frac{1}{2} \text{ m}$ (c) $4\frac{1}{2} \text{ m}$ (d) 22m (e) 14m
39. A common factor of $6cd$ and $9de$ is (a) $6c$ (b) $3d$ (c) $9e$ (d) $18dc$ (e) $6de$
40. An athlete runs q km in t hours. His speed is (a) qt km per hour (b) $\frac{q}{t}$ km per hour
(c) $\frac{t}{q}$ km per hour (d) $(q + t)$ km per hour (e) $(q - t)$ km per hour
41. 40 baskets of oranges weighs 51.8kg. What is the weight of a basket? (a) 1.965kg (b) 1.75kg (c) 1.46kg (d) 1.295kg (e) 1.18kg
42. $\frac{1}{6}$ of 36 = (a) 3 (b) 4 (c) 6 (d) 8 (e) 10
43. A car covered a distance of 88km in 40 minutes, what was its average speed? (a) 2.32km/hr (b) 1.32km/hr (c) 132km/hr (d) 22km/hr (e) 2.2km/hr.
44. A basket contains 105 oranges. How many groups of 5 oranges are there? (a) 20 (b) 21 (c) 18 (d) 16 (e) 10.
45. Evaluate $5^3 \div 6^1$ (a) $\frac{3}{7}$ (b) $\frac{8}{21}$ (c) $1\frac{3}{4}$ (d) $\frac{6}{7}$ (e) $\frac{1}{4}$
46. Find the value of $4^2 + 6^2$ (a) 52 (b) 40 (c) 30 (d) 10 (e) 8
47. What is $3\frac{1}{4} - 2\frac{1}{2} + 1\frac{3}{5}$ in its lowest term? (a) $2\frac{7}{20}$ (b) $1\frac{5}{20}$ (c) $3\frac{1}{20}$ (d) $2\frac{1}{20}$ (e) $1\frac{7}{20}$
48. What is the estimate value of the product 0.0402×134 to 2 decimal figures (a) 54.30 (b) 54.27 (d) 5.43 (e) 5.39
49. How many 60's can be subtracted from 480 (a) 4 (b) 5 (c) 8 (d) 9 (e) 10
50. Write in figure six million, and forty thousand (a) 604,000 (b) 640,000 (c) 6,040,000 (d) 6,000,004 (e) 60,000,040
51. A kite has----line of symmetry. (a) 2 (b) 3 (c) 1 (d) 5 (e) 6
52. How many minutes are there in 720 seconds (a) 10mins (b) 12 mins (c) 15 mins (d) 14 mins (e) 16 mins.
53. Find the value of $4x + x = 30$ (a) 6 (b) 28 (c) 16 (d) 10 (e) 9

John tossed a fair dice 20 times and the numbers that showed up were as follows: 1, 3, 2, 5, 4, 4, 6, 3, 4, 6, 6, 3, 4, 2, 1, 4, 6, 4, 3, 6. Use this information to answer questions 54, 55 and 56.

54. Find the Mode (a) 2 (b) 3 (c) 4 (d) 5 (e) 6
55. Find the Median (a) 3 (b) 4 (c) 4.5 (d) 5 (e) 5.5
56. Find the Mean. (a) 3 (b) 3.6 (c) 3.85 (d) 4 (e) 5.85
57. Calculate $25^2 - 15^2$ (a) 40 (b) 200 (c) 400 (d) 450 (e) 500
58. The highest common factor of 36, 72 and 90 is ---- (a) 9 (b) 18 (c) 36 (d) 90 (e) 360
59. A cube has ---- edges (a) 12 (b) 6 (c) 18 (d) 9 (e) 24
60. $8 - 9 - (-5)$ is (a) -6 (b) $+6$ (c) -4 (d) $+4$ (e) $+12$

THEORY: Answer all questions. (40 marks)

- Simplify $2\frac{1}{8} + 1\frac{5}{9} - 2\frac{1}{6}$
- The total number of students in a school is 720. There are 420 girls in the school. Find the ratio of boys to girls.
- Write the number 175 in Roman Numeral
- What is the square root of $5\frac{4}{9}$?