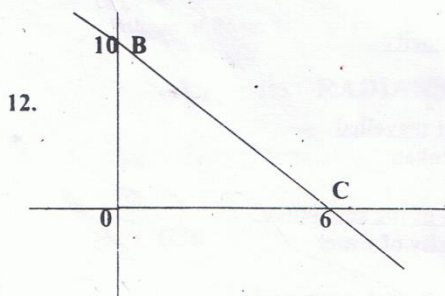


# TEST ONE

1. What is the size of each interior angle of a regular hexagon?  
(a)  $130^\circ$  (b)  $120^\circ$  (c)  $150^\circ$  (d)  $160^\circ$
2.  $\sqrt{\frac{54}{9}}$  (a) 0.75 (b) 2.33 (c) 0.8 (d) 0.25
3.  $4.56 \times 8.7 =$  (a) 93.672 (b) 3.9672 (c) 396.72 (d) 39.672
4.  $(\frac{14}{5})^2$  (a)  $\frac{16}{25}$  (b)  $\frac{25}{16}$  (c)  $\frac{81}{25}$  (d)  $\frac{25}{81}$
5.  $r = kxy$ , if  $k = 9$ ,  $x = 4$  and  $y = 7$ , then  $r =$   
(a) 252 (b) 225 (c) 522 (d) 352
6.  $\frac{5}{6}$  as a decimal is (a) 8.330 (b) 0.833 (c) 3.83 (d) 83.3
7.  $\sqrt{490000}$  (a) 70 (b) 700 (c) 7000 (d) 70000
8. Twelve men can dig a pit in 4 days. How many men can dig the same pit in 6 days?  
(a) 12 (b) 6 (c) 48 (d) 8
9.  $\frac{4x}{7} = \frac{11}{5}$ , then  $x =$  (a)  $3\frac{7}{20}$  (b)  $3\frac{17}{20}$  (c)  $2\frac{17}{20}$  (d)  $3\frac{1}{20}$
10. 0.85 may be written as: (a)  $\frac{9}{20}$  (b)  $\frac{17}{20}$  (c)  $\frac{1}{5}$  (d)  $\frac{3}{5}$
11.  $2:y = 9:4$ , then  $y =$  (a) 2 (b) 36 (c) 4 (d)  $\frac{8}{9}$



Then the gradient of the line BC is

- (a)  $-\frac{6}{10}$  (b)  $\frac{6}{10}$   
(c)  $-\frac{10}{6}$  (d)  $\frac{10}{6}$
13. 0.00005679 written in Standard Form is:  
(a)  $5.679 \times 10^6$  (b)  $5.679 \times 10^5$  (c)  $5.679 \times 10^{-6}$  (d)  $5.679 \times 10^{-5}$

14.  $\begin{pmatrix} 13 & 4 \\ 7 & 2 \end{pmatrix} \begin{pmatrix} 9 & 5 \\ 1 & 8 \end{pmatrix} =$  (a)  $\begin{pmatrix} 121 & 136 \\ 65 & 41 \end{pmatrix}$  (b)  $\begin{pmatrix} 121 & -65 \\ 136 & 51 \end{pmatrix}$   
(c)  $\begin{pmatrix} 136 & 51 \\ 65 & 121 \end{pmatrix}$  (d)  $\begin{pmatrix} 121 & 97 \\ 65 & 51 \end{pmatrix}$

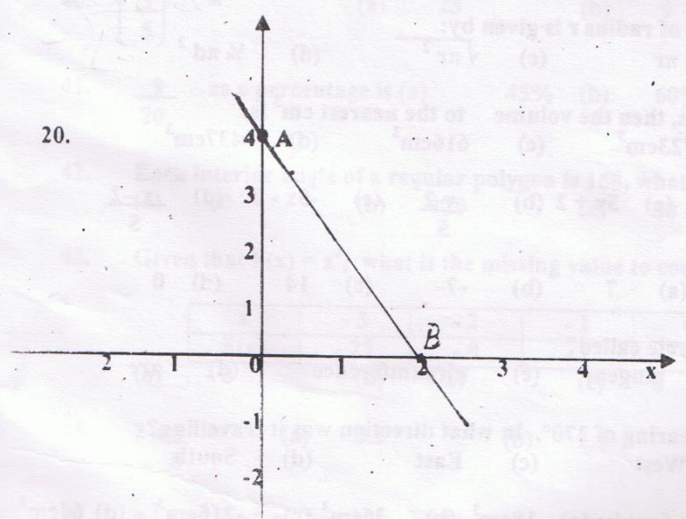
15. What is the reciprocal of 8? (a) 0.8 (b)  $\frac{1}{8}$  (c)  $\frac{1}{16}$  (d)  $8^{-2}$

16.  $A = \begin{pmatrix} 4 & 6 \\ 3 & x \end{pmatrix}$  A is a singular matrix. Then  $x =$   
(a) 0 (b)  $2\frac{1}{2}$  (c)  $4\frac{1}{2}$  (d) 8

17.  $\sqrt{0.000064 \times 10^{10}}$  = in Standard Form is:  
(a)  $8 \times 10^{-4}$  (b)  $8 \times 10^2$  (c)  $8 \times 10^4$  (d)  $8 \times 10^3$

18.  $3\frac{1}{2} - 2\frac{1}{4} =$  (a)  $\frac{5}{4}$  (b)  $1\frac{4}{5}$  (c)  $\frac{4}{5}$  (d)  $2\frac{1}{4}$

19.  $\frac{1}{0.0005} =$  (a) 20,000 (b) 200 (c) 20 (d) 2000

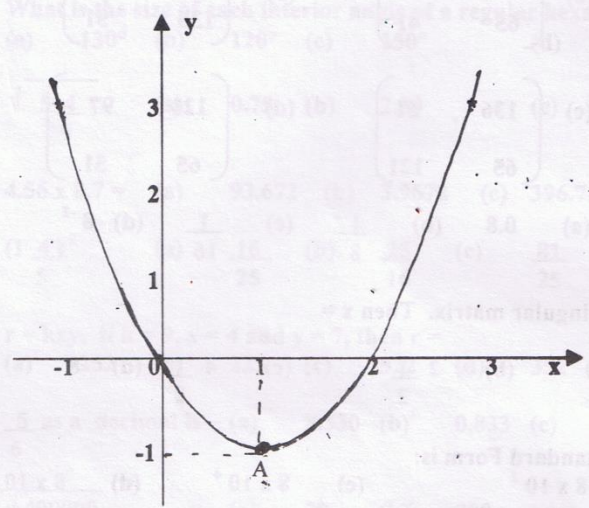


20.

What is coordinate of the point A?

- (a) (0, 4)
- (b) (4, 0)
- (c) (0, 0)
- (d) (4, 4)

21.



The diagram show the graph of  $y = x^2 - 2x$ , then the coordinate of A is

- (a) (-1, 0)
- (b) (1, 0)
- (c) (1, -1)
- (d) (1, 1)

22. If 4% of a number is 250, what is the number?  
(a) 6250 (b) 6520 (c) 6540 (d) 6052

23.  $\sqrt{0.0004} =$  (a) 0.02 (b) 0.2 (c) 0.002 (d) 0.20

24. The circumference of a circle of radius  $r$  is given by:  
 (a)  $\pi r^2$  (b)  $2\pi r$  (c)  $\sqrt{\pi r^2}$  (d)  $\frac{1}{4}\pi d^2$
25. A ball has a diameter of 14cm, then the volume to the nearest  $\text{cm}^3$  is:  
 (a)  $1437\text{cm}^3$  (b)  $723\text{cm}^3$  (c)  $616\text{cm}^3$  (d)  $437\text{cm}^3$
26.  $F(x) = 5x + 2$ , then  $F^{-1}(x) =$  (a)  $5y + 2$  (b)  $\frac{y-2}{5}$  (c)  $-5x - 2$  (d)  $\frac{x-2}{5}$
27. If  $F(x) = 3x + 2$ , then  $F(-3) =$  (a) 7 (b) -7 (c) 14 (d) 0
28. What is the perimeter of a circle called?  
 (a) diameter (b) tangent (c) circumference (d) arc
29. A boat was travelling on a bearing of  $270^\circ$ . In what direction was it travelling?  
 (a) North (b) West (c) East (d) South
30. The volume of a cube of edge 6cm is: (a)  $18\text{cm}^3$  (b)  $36\text{cm}^3$  (c)  $216\text{cm}^3$  (d)  $64\text{cm}^3$
31. The expression  $(3x - 2)(x + 1)$  may be written as:  
 (a)  $3x^2 - x - 2$  (b)  $3x^2 - x + 2$  (c)  $3x^2 + x - 2$  (d)  $3x^2 + x + 2$
32. What is another name for the ogive?  
 (a) Bar graph (b) Median (c) Cumulative Frequency Curve (d) Histogram
33.  $2^{-4} =$  (a)  $\frac{1}{32}$  (b)  $\frac{1}{4}$  (c)  $\frac{1}{16}$  (d)  $\frac{1}{8}$
34.  $(-4)^2 + (-2)^3 =$  (a) 8 (b) -24 (c) -14 (d) 24
35.  $x^2 - 3x + 2 =$  (a)  $(x - 2)(x + 1)$  (b)  $(x - 2)(x - 1)$  (c)  $(x + 2)(x - 1)$  (d)  $(x - 3)(x - 1)$
36. The equation of the line R is  $2y - x = 10$ , then the gradient is:  
 (a) -1 (b) 1 (c)  $-\frac{1}{2}$  (d)  $\frac{1}{2}$
37. A man wage of \$150.00 per week is increased by 10%. What is the new wage?  
 (a) \$160 (b) \$165 (c) \$170 (d) \$175
38. A footballer scored the following number of goals in different matches:  
 2, 5, 9, 1, 6, 3, 9. Then the mean is:  
 (a) 5 (b) 7 (c) 9 (d) 35
39.  $\frac{5}{n+2} - \frac{4}{n+1}$  as a single fraction is  
 (a)  $\frac{1}{(n+2)(n+1)}$  (b)  $\frac{n-3}{(n+2)(n+1)}$  (c)  $\frac{1}{2n+3}$  (d)  $\frac{1}{n}$
40.  $\left(\frac{3}{5}\right)^{-2} =$  (a)  $\frac{9}{25}$  (b)  $\frac{25}{9}$  (c)  $\frac{3}{5}$  (d)  $\frac{5}{3}$
41.  $\frac{9}{20}$  as a percentage is (a) 45% (b) 60% (c) 75% (d) 80%
42. Each interior angle of a regular polygon is 168, what is the number of sides?  
 (a) 60 (b) 120 (c) 30 (d) 80
43. Given that  $F(x) = x^3$ , what is the missing value to complete the table for  $F(x) = x^3$

x	-3	-2	-1	0	1	2
F(x)	-27	-8	-1	0	1	

- (a) -8 (b) -27 (c) 8 (d) 16

44.  $2 + \frac{5}{8} =$  (a) 3.2 (b) 2.3 (c) 4.8 (d) 3.6

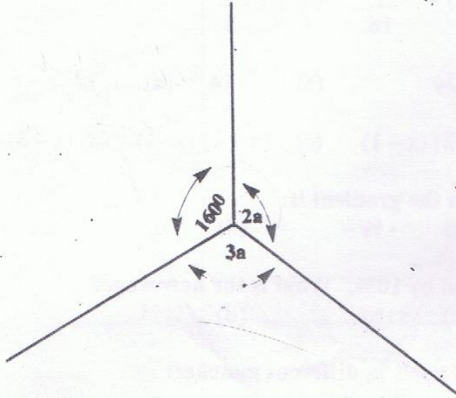
45.  $a^7 \times a^6 \times a^3 =$  (a)  $16a$  (b)  $a^{19}$  (c)  $a^{16}$  (d)  $a^{126}$

46. Express  $\frac{26}{8}$  as a mixed number. (a)  $3\frac{1}{2}$  (b)  $3\frac{1}{8}$  (c) 3.3 (d)  $3\frac{1}{4}$

47.  $x^2 + x - 72 = 0$ , then  $x$  is (a) 8 or -9 (b) 8 or 9 (c) -8 or -9 (d) 6 or 12

48. If  $a * b = 4a + 2b$ , then  $4 * 3$  is: (a) 14 (b) 22 (c) 13 (d) 12

49.



Then  $a =$

- (a)  $32^\circ$   
 (b)  $36^\circ$   
 (c)  $39^\circ$   
 (d)  $40^\circ$

50. A bag contains 3 red, 5 blue and 2 white marbles. The probability of drawing a red ball is:  
 (a)  $\frac{3}{10}$  (b)  $\frac{2}{10}$  (c)  $\frac{1}{2}$  (d)  $\frac{3}{5}$

51.  $\sqrt[3]{125} =$  (a) 25 (b) 5 (c) 15 (d) 10

52.  $2.3 \times 10^6 - 1.8 \times 10^5$  in Standard Form is  
 (a)  $2.12 \times 10^6$  (b)  $2.12 \times 10^5$  (c)  $21.2 \times 10^6$  (d)  $1.22 \times 10^5$

53.  $4x - 5(x + 7) =$  (a)  $-x + 7$  (b)  $-x - 35$  (c)  $x + 7$  (d)  $x + 35$

54.  $2^{2x+5} \times 8^{3x+7} = 64$ , the value of  $x$  is  
 (a)  $\frac{6}{11}$  (b)  $\frac{-13}{8}$  (c)  $\frac{-20}{11}$  (d)  $\frac{-11}{20}$

55. Each exterior angle of a regular polygon measure  $45^\circ$ . How many sides has the polygon?  
 (a) 4 (b) 6 (c) 8 (d) 10

56. If  $h(x) = \frac{3x-2}{5}$  then  $h(-5) =$  (a) -4 (b)  $\frac{16}{5}$  (c)  $\frac{16}{5}$  (d) 4

57.  $\frac{1}{0.25} =$  (a) 16 (b) 4 (c) 8 (d) 24

58.  $\frac{4x+8}{2} =$  (a)  $2x+8$  (b)  $2x+4$  (c)  $4x+4$  (d)  $6x$

59. The simple interest on \$560 for 3 years at  $12\frac{1}{2}\%$  per annum is?  
 (a) \$70 (b) \$210 (c) \$630 (d) \$770

60.  $B = \begin{pmatrix} 5 & 7 \\ 13 & 8 \end{pmatrix}$  then  $B^{-1}$  is

- (a)  $\begin{pmatrix} \frac{8}{51} & \frac{7}{51} \\ \frac{13}{51} & \frac{5}{51} \end{pmatrix}$  (b)  $\begin{pmatrix} \frac{-8}{51} & \frac{-7}{51} \\ \frac{13}{51} & \frac{-5}{51} \end{pmatrix}$  (c)  $\begin{pmatrix} \frac{-8}{51} & \frac{7}{51} \\ \frac{13}{51} & \frac{-5}{51} \end{pmatrix}$  (d)  $\begin{pmatrix} \frac{-8}{51} & \frac{-7}{51} \\ \frac{-13}{51} & \frac{-5}{51} \end{pmatrix}$