

1. Answer these questions without using a calculator :  $6 - (9 - 4) =$

- (a) 7  
 (b) 1  
 (c) -7  
 (d) -1  
 (e) NOTA

2. Answer these questions without using a calculator :  $9 - 3 \times 4 =$

- (a) 24  
 (b) -24  
 (c) -3  
 (d) 3  
 (e) NOTA

3. Answer these questions without using a calculator :  $3 \times 10^2 =$

- (a) 300  
 (b) 900  
 (c) 30  
 (d) 90  
 (e) NOTA

4. Answer these questions without using a calculator :  $3^2 + 4^2 =$

- (a) 25  
 (b) 49  
 (c) 7  
 (d) 52  
 (e) NOTA

5. Answer these questions without using a calculator :

$$27 \div (3+6)-3=$$

- (a) 12
  - (b) 4.5
  - (c) 0
  - (d) 4
  - (e) NOTA
- 

6. Answer these questions without using a calculator :

$$16- [10-(6-2)]$$

- (a) -2
  - (b) 2
  - (c) 10
  - (d) -10
  - (e) NOTA
- 

7. Simplify :  $9m \times 2n$

- (a)  $11mn$
  - (b)  $18mn$
  - (c)  $18m+n$
  - (d)  $7mn$
  - (e) NOTA
- 

8. Simplify the expression :  $16ab \div 4b$

- (a)  $12a$
  - (b)  $4ab$
  - (c)  $12b$
  - (d)  $4a$
  - (e) NOTA
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9. Expand and simplify the expression :  $5 ( y - 3 ) + 2y$

- (a)  $7y-15$
  - (b)  $7y+15$
  - (c)  $y-2$
  - (d)  $17y$
  - (e) NOTA
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10. Expand and simplify the expression :  $2y(y - 3) + y(y + 2)$

- (a)  $3y^2 + 4y$
  - (b)  $7y^2$
  - (c)  $7y$
  - (d)  $3y^2 - 4y$
  - (e) NOTA
- 

11. Factorise by taking out the highest common factor :  $6x^2y + 9x$

- (a)  $3x(2xy + 3)$
  - (b)  $2x(3xy + 6)$
  - (c)  $3x(2xy - 3)$
  - (d)  $x(6xy + 9)$
  - (e) NOTA
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12. Factorise by taking out a negative common factor :  $-9yz + 6xy$

- (a)  $-3y(3z + 2x)$
  - (b)  $2y(3x - 2z)$
  - (c)  $-3y(3z - 2x)$
  - (d)  $-3y(2x - 3z)$
  - (e) NOTA
- 

13. Simplify, giving your answer in index form :  $a^3 \times a^2$

- (a)  $2a^6$
  - (b)  $a^6$
  - (c)  $a^5$
  - (d)  $2a^5$
  - (e) NOTA
- 

14. Simplify, giving your answer in index form :  $b^3 \div b$

- (a)  $b^2$
  - (b) 3
  - (c) b
  - (d)  $2b^3$
  - (e) NOTA
-

15. Simplify :  $(5xy^2)^4$

- (a)  $5x^4y^8$
  - (b)  $625x^4y^8$
  - (c)  $25xy^6$
  - (d)  $625xy^2$
  - (e) NOTA
- 

16. Simplify :  $36a^3b^4 \div 12a^2b^4$

- (a)  $3a^5b^8$
  - (b)  $24ab$
  - (c)  $3ab$
  - (d)  $3a$
  - (e) NOTA
- 

17. Rewrite without a negative index :  $m^{-3}$

- (a)  $\frac{1}{m^2}$
  - (b)  $\frac{1}{m^3}$
  - (c)  $\frac{-3}{m}$
  - (d)  $m$
  - (e) NOTA
- 

18. Rewrite without a negative index :  $5x^{-2}$

- (a)  $\frac{5}{x^{-2}}$
  - (b)  $\frac{1}{5x^2}$
  - (c)  $3x$
  - (d)  $\frac{5}{x^2}$
  - (e) NOTA
- 

19. Solve the following :  $a + 7 = 25$

- (a) -18
  - (b) 32
  - (c) -23
  - (d) 18
  - (e) NOTA
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20. Solve the following :  $3q - 5 = 1$

- (a) 2
  - (b) -2
  - (c) 8
  - (d) 7
  - (e) NOTA
- 

21. Solve the following :  $5n - 6 = 3n + 2$

- (a) 1
  - (b) 5
  - (c) 4
  - (d) 2
  - (e) NOTA
- 

22. Solve the following :  $10 - q = 9 + 3q$

- (a)  $\frac{1}{2}$
  - (b)  $\frac{2}{3}$
  - (c)  $\frac{1}{4}$
  - (d)  $\frac{1}{8}$
  - (e) NOTA
- 

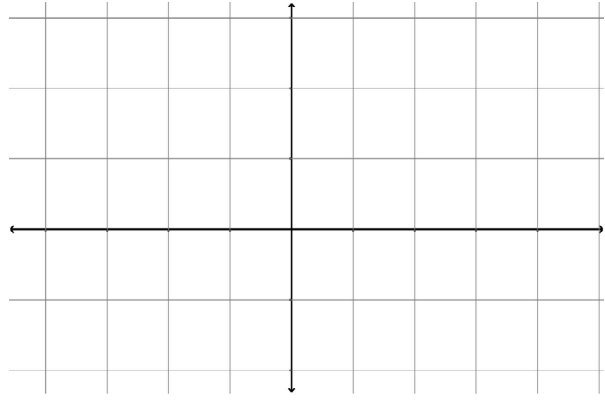
23. Solve this equation involving grouping symbols :  $4(2x-1)-2(x+3)=5$

- (a) 3
  - (b) 3.5
  - (c) 2
  - (d) 2.5
  - (e) NOTA
- 

24. Solve this equation :  $\frac{2p + 5}{3} = 1$

- (a) 1.5
- (b) -1
- (c) -105
- (d) 0.5
- (e) NOTA

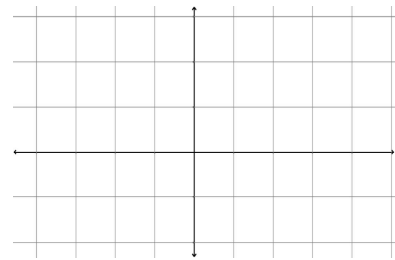
25. Graph this straight line :  $y = -2x + 3$



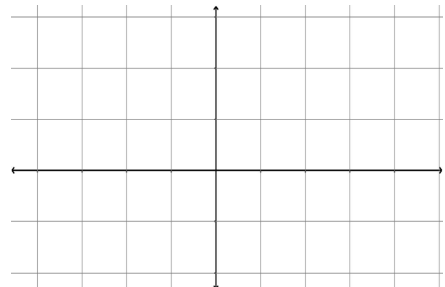
26. Which of the following lines pass through the point  $(0,2)$  ?

- (a)  $y = 2x$
- (b)  $y = 2x - 2$
- (c)  $y = x + 2$
- (d)  $y = 5x + 2$
- (e)  $x + y = 2$

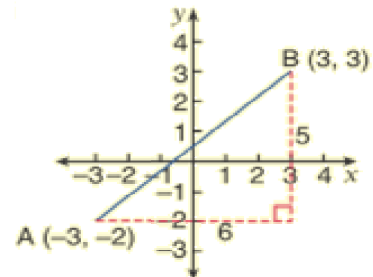
27. Graph the following line :  $y = 3$



28. Graph the following line :  $x = -2$



29. Find the gradient of AB in this case :



30. Find the gradient of the line that passes through the following points :  
(-4, 3) and (1, 4)

- (a)  $\frac{2}{5}$
- (b)
- (c) 1
- (d)
- (e) NOTA

31. If  $a = 3$ ,  $b = 5$  and  $c = -6$ , find the value of :  $a + c$

- (a) -3
- (b) 3
- (c) 8
- (d) -2
- (e) NOTA

32. If  $a = 3$ ,  $b = 5$  and  $c = -6$ , find the value of :  $a + b + c$

- (a) 0
- (b) 14
- (c) 2
- (d) 4
- (e) NOTA

33. If  $x = 2.1$  ,  $y = 3.5$  and  $z = 2.8$  , evaluate P if :  $P = 2x + 3y$

- (a) 1.4
- (b) -1.4
- (c) 14.5
- (d) 14.7
- (e) NOTA

34. If  $x = 2.1$  ,  $y = 3.5$  and  $z = 2.8$  , evaluate P if :  $P = \frac{x + y}{z}$

- (a) 3.35
- (b) 2
- (c) 2.62
- (d) 2.625
- (e) NOTA

Translate the following into equation using n as the unknown

35. number :

I think of a number, double it, add 7 and the result is 5

- (a)  $2n+5=7$
- (b)  $2n+7=5$
- (c)  $2n-7=-5$
- (d)  $2(n+7)=5$
- (e) NOTA



Translate the following into equation using n as the unknown number :

36. I think of a number, add 4 and then divide the result by 10. The answer is 7

- (a) :
- (b) 1
- (c) 1
- (d)  $\frac{n + 4}{10} = 7$
- (e) NOTA

37. Write the set of x that has been graphed below:



- (a) :
- (b) :
- (c) :
- (d)  $x \leq -2$
- (e) NOTA

38. Solve these inequations & show the solution to each on a number line.  
 $2x + 7 > 11 - x$

39. Solve these inequations & show the solution to each on a number line.

$$\frac{10 - y}{2} \geq 8$$

## Summary of Results ملخص النتائج

	النتيجة بالدرجات Raw Score					
	Easy سهل		Medium متوسط		Hard صعب	
	Score الدرجة	Possible القيمة المتاحة	Score الدرجة	Possible القيمة المتاحة	Score الدرجة	Possible القيمة المتاحة
<b>Order of operation</b>		2 Q1-Q2		2 Q3-Q4		2 Q5-Q6
<b>Algebraic Expressions</b>		2 Q7-Q8		2 Q9-Q10		2 Q11-Q12
<b>Indices</b>		2 Q13-Q14		2 Q15-Q16		2 Q17-Q18
<b>Equations &amp; Ineqations</b>		3 Q19:Q21		3 Q22:Q24		<b>3</b> <b>Q37:Q39</b>
<b>Coordinate Geometry</b>		2 Q25-Q26		2 Q27-Q28		2 Q29-Q30
<b>Formulae &amp; Problem-Solving</b>		2 Q31-Q32		2 Q33-Q34		2 Q35-Q36