W. Clinara

2. 20% of 2 is equal to

(a) 0.4

(c) 222 (d) 1

(b) 0.3

3. If $Log_4x = 12$, then $log_2(x/4) =$

1 (a) 42 (b) 32

(8) 11

(a) 1848000

(e) 1848500

(b) 1848250

(d) 1848750

5. "f" is a quadratic function whose graph is a parabola opening upward and has a vertex on the x-axis. The graph of the new function g defined by g(x) = 2 - f(x - 5) has a range defined by the interval

(a) $[-\infty, 2]$

(c) (∞,<mark>2]</mark>

(b) (-∞,2)

(d) (-∞,2]

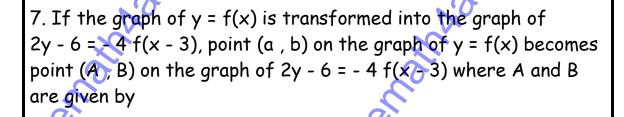
6. "f" is a function such that f(x) < 0. The graph of the new function g defined by g(x) = |f(x)| is a reflection of the graph of f

(a) on the y-axis

(c) parallel to y-axis

(b) on the x-axis

(d) parallel to x-axis



8. When a parabola represented by the equation $y - 2x^2 = 8 x + 5$ is translated 3 units to the right and 2 units up, the new parabola has its vertex at

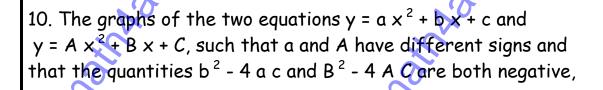
9. The graphs of the two linear equations ax + by = c and bx - ay = c, where a, b and c are all not equal to zero

(a) are parallel

(c) never intersect

(b) perpendicular

(d) none of these



- (a) intersect at two points
- (c) do not intersect

(b) Perpendicular

(d) None of these

11. For x greater than or equal to zero and less than or equal to x pi, x and x are both decreasing on the intervals

(a) $(\pi/2, \pi)$

(c) $(\pi, \pi/2)$

(b) (π/3, π/2)

(d) $(\pi/3, \pi)$

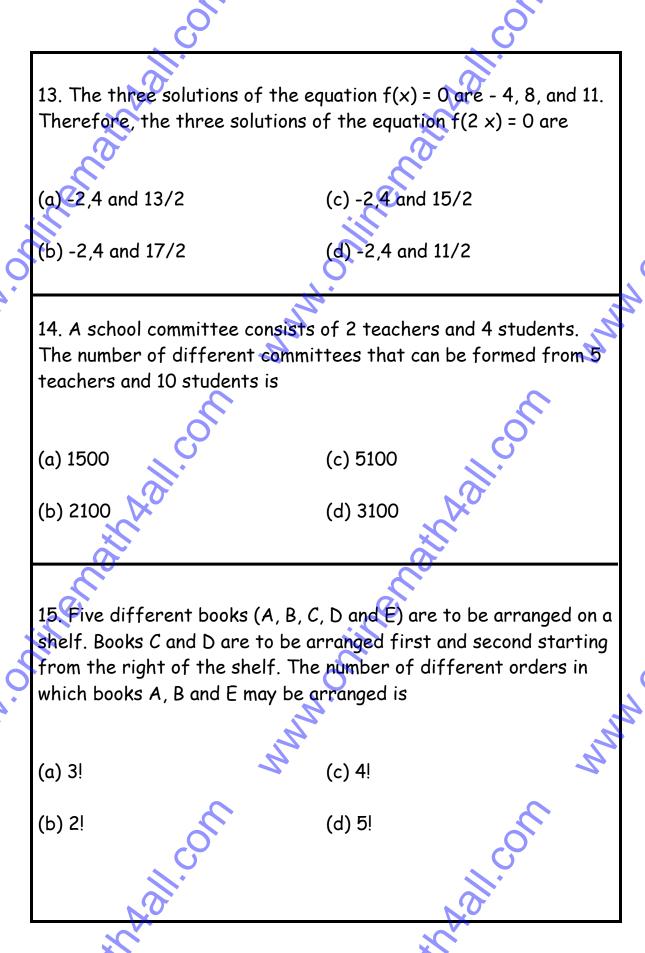
12. The three solutions of the equation f(x) = 0 are -2, 0, and 3. Therefore, the three solutions of the equation f(x - 2) = 0 are

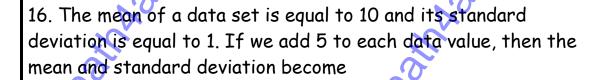
(a) 0,3 and 5

(c) 0,2 and 5

(b) 0,2and 6

(d) 0,3 and 11





(c) Mean =
$$15$$
, S.D = 1

(b) Mean =
$$16$$
, S.D = 1

17. The exam scores of all 500 students were recorded and it was determined that these scores were normally distributed. If Jane's score is 0.8 standard deviation above the mean, then how many, to the nearest unit, students scored above Jane?

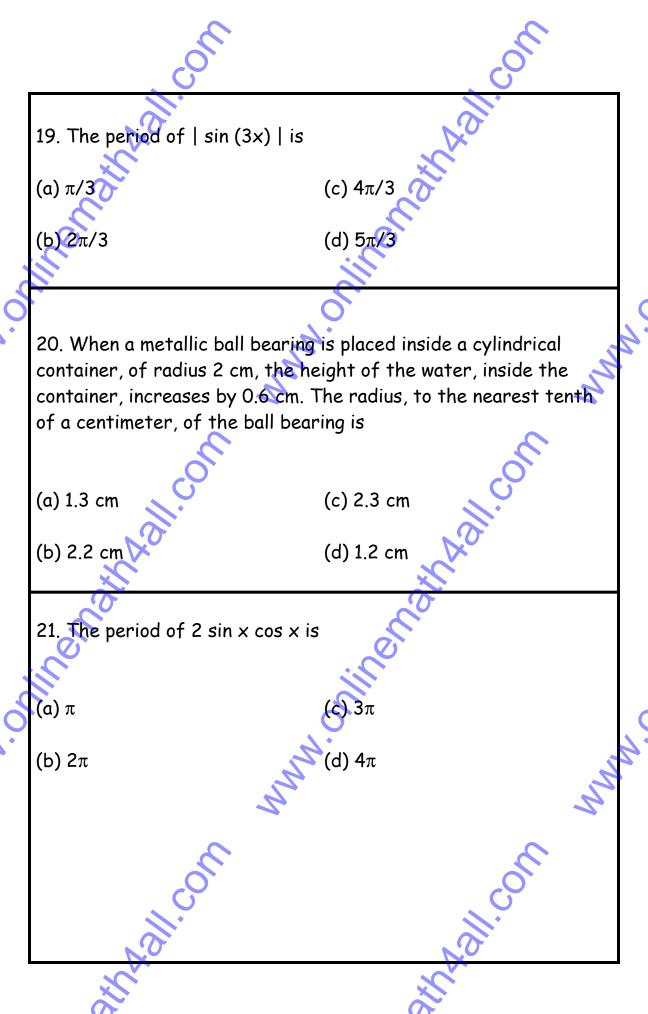
18. If f(x) is an odd function, then | f(x) | is

(a) An even function

(c) An odd function

(b) Neither odd nor even

(d) Even and Odd



22. The probability that an electronic device produced by a
company does not function properly is equal to 0.1. If 10 devices
are bought, then the probability, to the nearest thousandth, that
7 devices function properly is

(a) 0.027 (b)

(d) 0.057

23. An overhead tank has been constructed to supply water to a village with a population of 3140 at the rate of 25 liters per head per day. Water is pumped in to it through a pipe of 10 cm diameter, the rate of flow 4 meter per second. How long will it take to fillthe tank every morning?

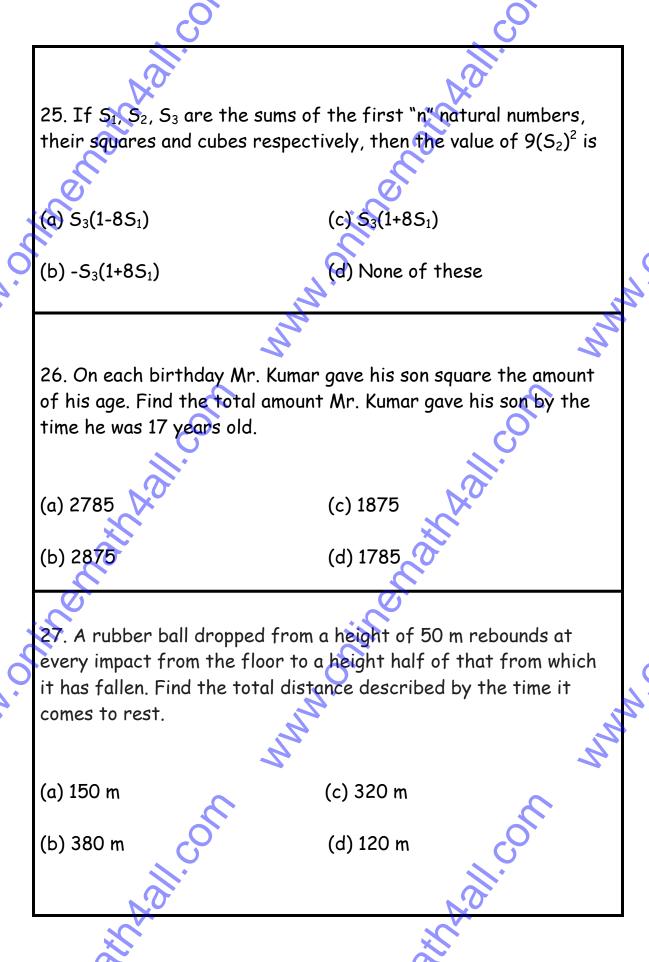
(a) 51 minutes 10 seconds (c) 41 minutes 10 seconds

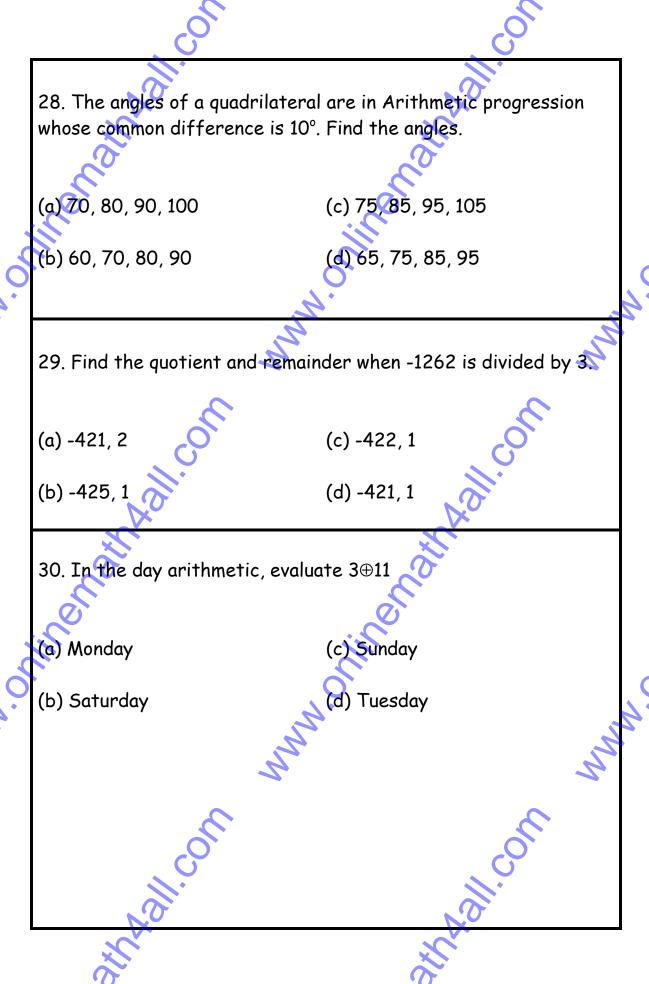
(b) 41 minutes 40 seconds (d) 51 minutes 40 seconds

24. Ina cylindrical wooden block of radius 7 cm and height 14 cm hemispherical blocks of radius 7 cm are carved out from both the ends. Find the volume of the resulting solid.

(c) $(228.67)\pi$ cubic ch (a) $(238.67)\pi$ cubic cm

(b) (248.67)π cubic cm (d) $(218.67)\pi$ cubic cm





(d) 3

32. Find the value of $\sqrt{3}\sqrt{3}\sqrt{3}$

(a) 9

(c) 3

(b) 1.732

(d) None

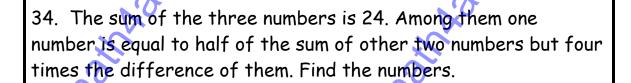
33. Find the value of "m", if $f \circ g = g \circ f$, when f(x) = 2x+3 and g(x) = 5x+m.

(a) 43

(b) 43

(a) 43 Muh. S

(b) 28



(a) 8,9,7

(c) 5, 2, 3

(b) 5, 2, 3

35. Find the quotient and remainder when x^3+x^2-3x+5 divided by x-1. (c) x^2+2x-1 , 4 (d) x^2+2x+1 , 4

(a)
$$x^2-2x-1$$
, 4
(b) x^2-2x+1 , -4

(c)
$$x^2+2x-1$$
, 4

(b)
$$x^2$$
-2x+1, -4

(d)
$$x^2+2x+1$$
 4

36. Find the value of "a" and "b" if $3x^4+x^3+ax^2+5x+b$ is exactly divisible by (x+2) and (x-1).

(a) -7, -2

(c) 7, 2

(b) 4, 3

(d) -4, -3



(a) a-3

(b) a-2

(c) a-4 (d) a-

38. Find the square root of 0.0169

(a) 0.15

(c) 13

(b) 0.13

(d) 15

39. If "a" and "b" are the roots of the equation x^2 -3x-4=0, form the equation whose roots are (2a+1), (2b+1)

(a)
$$x^2-8x-9=0$$

(c)
$$x^2 - 8x + 9 = 0$$

(d) None of these

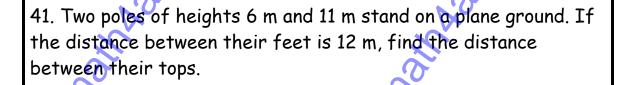
40. If all the sides of a parallelogram touch a circle, then the parallelogram is a

(a) Quadrilateral

(c) Square

(b) Triangle ?

(d) Rhombus



(a) 14 m

(c) 13 m

(b) 12 m

(d) 15 m

42. Find the equation of the straight line through the point (4,-5) and having x and y intercepts in the ratio 3:5

(a) 5x+3y-5=0

(c) 5x+3y+5=0

(b) 5x-3y-5=0

(d) None of these

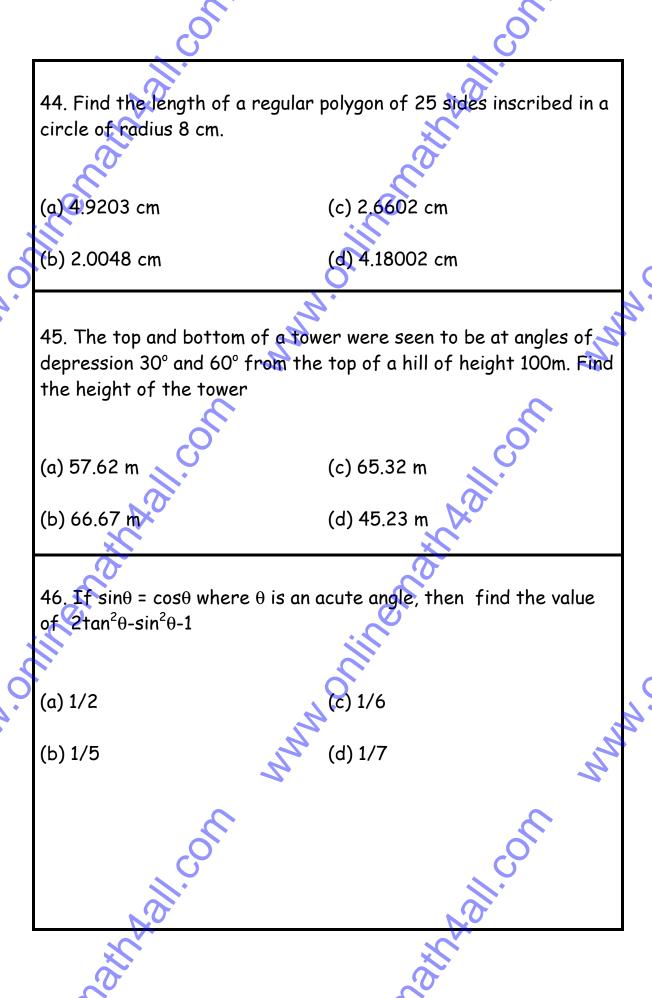
43. Find the equation of the straight line passing through the point of intersection of the straight lines 2x+y-3=0 and 5x+y-6=0 and perpendicular to the line joining the points (1,2) and (2,1).

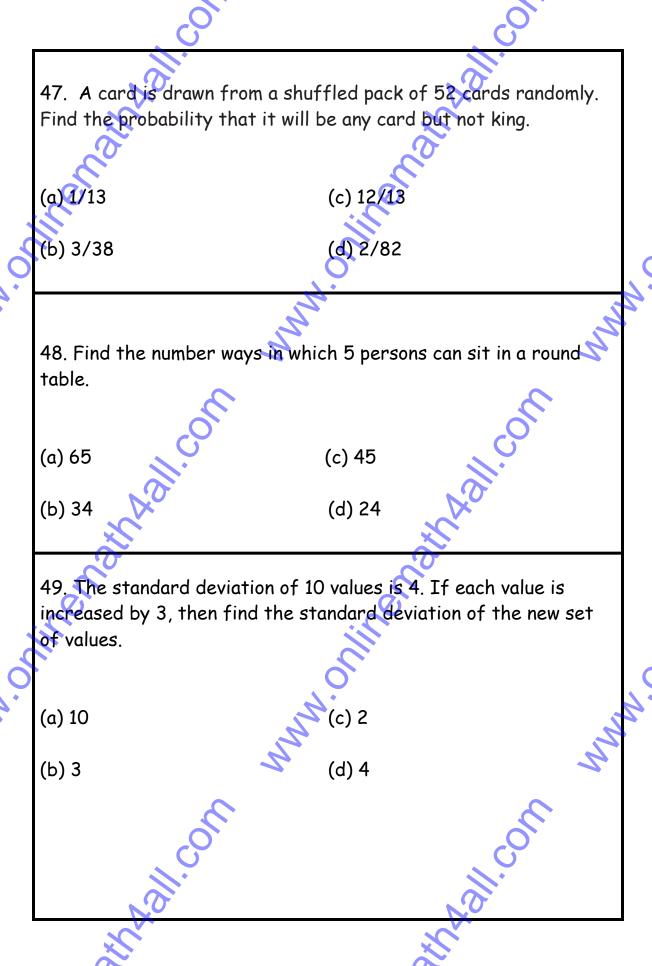
(a) x-3y=0

(c) x+y=0

(b) 2x-y=0

(d) x-y=0





50. The mean and standard deviation of 100 items are found to be 40 and 10. At the time of calculations two items were wrongly My Ochrone taken as 30 and 70 instead of 3 and 27. Find the correct mean and standard deviation. (6) 29.3, 10.24 WWW.S (a) 39.3, 9.24 .5, 10.24 (d) 39.3, 10.24 (b) 49.3, 20.24 MANO SILVER SILVERS SI Mund-line Rainkall. Colf. My Ocircon CACALLO OFF

	COLL				COM			
	Answers	NO.			XX	•		
	1. b	2. a	3. c 9. b 15. a	4. a	5. d	6. b		
ANN ON O	7. a	8. c	9. b	10. c	11. a	12. c		
NA	13. d	14. b	15. a	16. c	17. b	18. a	N	
	1.0	00 1	\	22. d	23. b	24. c		
	25. c	20. d 26. d	27. a	28. c	29. d	30. c		
	31. a	32. c	33. d	34. a	3 5. c	36. a		2
MAN O.	37 . d	38. b	39. a	40.8	35. c 41. c 47. c	42. a		illo.
Tay.	43. d	44. b	45. b	46. a	47. c	48. d		
7	49. d	50. d					7-	
		50. d			TO XXX			2