REG-CP2B-2425-ASM-SET 2-MATH
Suggested solutions

Multiple Choice Questions

1. B	2. D	3. B	4. C	5. A
6. A	7. C	8. D	9. A	10. B
11. C	12. C	13. D	14. C	15. D
16. A	17. B	18. D	19. C	20. D
21. D	22. D	23. C	24. D	25. D
26. D	27. C	28. A	29. B	30. A
31. B	32. C	33. D	34. D	35. D
36. D	37. A	38. A	39. A	40. D
41. C	42. C	43. B	44. A	45. C
46. C	47. C	48. B	49. B	50. B
51. B	52. B	53. C	54. B	55. D
56. B	57. C	58. A	59. D	

1. $\boxed{\text{B}}$

I. ✓. Let the interior angle be θ.

$$\theta + \frac{\theta}{6} = 180°$$
$$\theta = \frac{1080°}{7}$$

II. ✗. Each exterior angle is $\frac{180°}{7}$.
Number of sides of the polygon is 14.
Number of diagonals $= C_2^{14} - 14$
$= 77$

III. ✓.

2. $\boxed{\text{D}}$

$$\text{Required probability} = \frac{5!2!}{6!} = \frac{1}{3}$$

3. $\boxed{\text{B}}$

$$\text{Number of ways} = C_2^7 C_3^{10} + C_3^7 C_2^{10} + C_4^7 C_1^{10} + C_5^7 = 4466$$

4. C

   I. ✓.

   II. ✗. Take $n = 3$. The polygon is a regular hexagon.
   Number of diagonals $= C_2^6 - 6 = 9 \neq n$

   III. ✓.
   Ratio of an exterior angle to an interior angle
   $= \dfrac{360°}{2n} : \dfrac{(2n-2)180°}{2n}$
   $= 1 : (n-1)$
   Thus, we have $m = n - 1$, and it is an integer.

5. A

Number of queues $= 7!5!$
$= 604\,800$

6. A

Required number $= C_3^{18}C_3^{12} + C_4^{18}C_2^{12} + C_5^{18}C_1^{12} + C_6^{18}$
$= 502\,860$

7. C

Required probability $= \dfrac{C_4^{12}}{C_4^{17}}$
$= \dfrac{99}{476}$

8. D

Required number $= C_3^{22}C_2^{18} + C_4^{22}C_1^{18} + C_5^{22}$
$= 393\,624$

9. A

Note that the sum of an interior angle and an exterior angle is 180°.
Exterior angle $= 180° \times \dfrac{2}{7+2} = 40°$
Number of sides $= \dfrac{360°}{40°} = 9$

   I. ✓.

   II. ✓.

   III. ✗. Number of diagonals $= C_2^9 - 9$
   $= 27$

10. B

Required number $= C_4^{12} + C_3^{12}C_1^6$

$= 1815$

11. C

Let X be the number of black balls drawn from bag A.

Required probability

$= \text{P}(X = 2) \times \frac{6}{12} + \text{P}(X = 1) \times \frac{5}{12} + \text{P}(X = 0) \times \frac{4}{12}$

$= \frac{C_2^5}{C_2^8} \times \frac{6}{12} + \frac{C_1^5 C_1^3}{C_2^8} \times \frac{5}{12} + \frac{C_2^3}{C_2^8} \times \frac{4}{12}$

$= \frac{7}{16}$

12. C

Required probability $= 1 - 0.8^5$

$= 0.672\,32$

13. D

Number of arrangements $= 8!4!$

$= 967\,680$

14. C

Required probability $= \frac{C_2^{12}}{C_2^{15}}$

$= \frac{22}{35}$

15. D

Required probability $= 1 - (1 - 0.6)(1 - 0.55)$

$= 0.82$

16. A

Common difference $= \dfrac{-7+13}{2} = 3$

I. ✓. 11th term $= -13 + (11-1)(3) = 17$

II. ✓. The first two odd terms are -13 and -7.

Sum of first 50 odd terms

$= \dfrac{[-13 + (-13 + (50-1)6)]50}{2}$

$= 6700$

III. ✗. Let the number of terms be n.

$$-13 + (n-1)(3) < 200$$
$$n < 72$$

There are 71 terms in the sequence smaller than 200.

17. B

Let the first term and the common difference be a and d respectively.
Note that the new group is formed by adding d to each of the number in the original group.

I. ✗. We have $x_2 = x_1 + d$.

Take $d = -1$, then we have $x_1 > x_2$.

II. ✓.

III. ✗. We have $z_1 = z_2$.

18. D

Let the first term and common difference be a and d respectively.
We have $d = \dfrac{12-8}{2} = 2$ and $a = 8 - 3d = 2$.

I. ✓. $x_{n+1} - x_n = 2 > 0$

II. ✓. $x_{92} + x_{100} = (a+91d) + (a+99d) = 2(a+95d) = 2x_{96}$

III. ✓. $2^{-x_1} + 2^{-x_2} + 2^{-x_3} + \ldots + 2^{-x_n}$

$= \dfrac{1}{2^2} + \dfrac{1}{2^4} + \dfrac{1}{2^6} + \ldots + \dfrac{1}{2^{2n}}$

$< \dfrac{1}{2^2} + \dfrac{1}{2^4} + \dfrac{1}{2^6} + \ldots$

$= \dfrac{\frac{1}{4}}{1 - \frac{1}{4}}$

$= \dfrac{1}{3} < \dfrac{1}{2}$

19. C

Common difference = log 10 − log 2 = log 5

$$\text{Required sum} = \frac{[\log 2 + (\log 2 + 6\log 5)](7)}{2}$$
$$= 7(\log 2 + 3\log 5)$$
$$= 7\log\left(2 \times 5^3\right)$$
$$= 7\log 250$$

20. D

Let first term and common ratio be a and r respectively.

$$\frac{ar^7}{ar^3} = \frac{4}{243} \div \frac{1}{12}$$
$$r^4 = \frac{16}{81}$$
$$r = \pm\frac{2}{3}$$

When $r = \frac{2}{3}$, $a = \frac{1}{12} \div r^3 = \frac{9}{32}$ and $S(\infty) = \frac{a}{1-r} = \frac{27}{32} > \frac{1}{2}$ (rejected).
When $r = -\frac{2}{3}$, $a = \frac{1}{12} \div r^3 = -\frac{9}{32}$.

I. ✗.

II. ✓. $a_1 + a_2 + \ldots + a_{10} = \frac{a(r^9 - 1)}{r - 1} \approx -0.173 < -\frac{1}{10}$.

III. ✓. $a_2 + a_4 + \ldots = \frac{ar}{1 - r^2} = \frac{27}{80}$.

21. D

Probability of getting two equal numbers in one throw

$$= \frac{6}{36}$$
$$= \frac{1}{6}$$

Required probability

$$= \frac{5}{6} \times \frac{1}{36} + \left(\frac{5}{6}\right)^3 \times \frac{1}{36} + \left(\frac{5}{6}\right)^5 \times \frac{1}{36} + \ldots$$
$$= \frac{\frac{5}{6} \times \frac{1}{36}}{1 - \left(\frac{5}{6}\right)^2}$$
$$= \frac{5}{66}$$

22. D

Let d be the common difference of the arithmetic sequence.

The last 26 terms can be obtained by adding $26d$ to each of the first 26 terms.

$$\text{Standard deviation} = \sqrt{25} = 5$$

23. C

$BFFFFFFFFFF_{16}$

$= 11 \times 16^{10} + 15 \times 16^9 + 15 \times 16^8 + \ldots + 15 \times 16^0$

$= 11 \times 16^{10} + \dfrac{15(16^{10} - 1)}{16 - 1}$

$= 11 \times 16^{10} + 16^{10} - 1$

$= 12 \times 16^{10} - 1$

24. D

Let d be the common difference of the arithmetic sequence.

$$\frac{a_1 + 2d}{a_1} = \frac{a_1 + 8d}{a_1 + 2d}$$

$$a_1^2 + 4a_1 d + 4d^2 = a_1^2 + 8a_1 d$$

$$-4a_1 d + 4d^2 = 0$$

$$d = a_1 \quad \text{or} \quad 0 \text{ (rejected)}$$

$$\text{Common ratio} = \frac{a_1 + 2d}{a_1} = 3$$

25. D

$(p - 12) - (1 - p) = (7 - p) - (p - 12)$

$p = 8$

The first three terms of the arithmetic sequence are -7, -4 and -1.

The first term and the common difference are -7 and 3 respectively.

I. ✓. The 36th term $= -7 + 35(3) = 98$

II. ✓. $-7 + (n - 1)3 < 100$

$n < 36.7$

There are exactly 36 terms of the sequence that are smaller than 100.

III. ✓. Required sum $= \dfrac{[T(1) + T(99)]50}{2}$

$= \dfrac{[-7 + [-7 + 98(3)]]50}{2}$

$= 7000$

26. D

I. ✓. $2016\left(\frac{1}{2}\right)^n > 1$

$$\left(\frac{1}{2}\right)^n > \frac{1}{2016}$$

$$n \log \frac{1}{2} > \log \frac{1}{2016}$$

$$n < 10.98$$

There are 10 terms greater than 1.

II. ✓. $2(a_{n+1} - a_{n+2}) = 2\left[2016\left(\frac{1}{2}\right)^{n+1} - 2016\left(\frac{1}{2}\right)^{n+2}\right]$

$$= 2016\left(\frac{1}{2}\right)^n - 2016\left(\frac{1}{2}\right)^{n+1}$$

$$= a_n - a_{n+1}$$

III. ✓. Note that all terms are positive.

$a_2 + a_4 + \ldots + a_{2n}$

$< a_2 + a_4 + a_6 + \ldots$

$$= \frac{\left(\frac{2016}{4}\right)}{1 - \left(\frac{1}{2}\right)^2}$$

$= 672$

< 689

27. C

I. ✓. We have $\frac{7^b}{7^a} = 7^{b-a}$ and $\frac{7^c}{7^b} = 7^{c-b} = 7^{b-a}$.

Thus, 7^a, 7^b, 7^c form a geometric sequence.

II. ✓. We have $(a + c) - (a + b) = c - b$ and $(b + c) - (a + c) = b - a = c - b$.

Thus, $a + b$, $a + c$, $b + c$ form an arithmetic sequence.

28. A

Let a and d be the first term and the common difference respectively.

$$\begin{cases} a + 12d = 78 \\ a + 20d = 46 \end{cases}$$

Solving, we have $a = 126$ and $d = -4$.

I. ✓. $a_{30} = 126 + 29(-4) = 10 > 0$

II. ✓. $a_3 - a_5 = -2d = 8 > 0$

III. ✗.

$$\begin{aligned} a_{15} + a_{16} + a_{17} + \ldots + a_{50} &= \frac{(a_{15} + a_{50})36}{2} \\ &= \frac{(70 - 70)36}{2} \\ &= 0 \end{aligned}$$

29. B

Required probability

$$= \left(\frac{5}{6}\right)\left(\frac{1}{6}\right) + \left(\frac{5}{6}\right)^3\left(\frac{1}{6}\right) + \left(\frac{5}{6}\right)^5\left(\frac{1}{6}\right) + \ldots$$

$$= \frac{\frac{5}{36}}{1 - \left(\frac{5}{6}\right)^2}$$

$$= \frac{5}{11}$$

30. A

Let $S(n) = 3n^2 - 6n$ and $T(n)$ be the nth term of the sequence.

I. ✓. 2nd term $= S(2) - S(1)$

$= 3$

II. ✓.

$$\begin{aligned} T(n) &= S(n) - S(n-1) \\ &= 3[n^2 - (n-1)^2] - 6[n^2 - (n-1)] \\ &= 3(2n - 1) - 6 \\ &= 6n - 9 \end{aligned}$$

$$\begin{aligned} 6n - 9 &= 21 \\ n &= 5 \end{aligned}$$

21 is the 5th term of the sequence.

III. ✗. The first few terms of the sequence are $-3, 3, 9, 15$.

It is obvious that the common ratio of the sequence does not exist.

The sequence is not a geometric sequence.

31. B

The graph of $y = f(x)$ is reduced along the x-axis to $\frac{1}{2}$ times the original to the graph of $y = f(2x)$.
The answer is B.

Note that $f(0) = 8$ and $f(-2) = f(6) = 0$.

$$g(0) = f(2\times 0) = f(0) = 8 \quad \text{and} \quad g(-1) = f(2\times(-1)) = f(-2) = 0 \quad \text{and} \quad g(3) = f(2\times(3)) = f(6) = 0$$

In the graph of $y = g(x)$, the y-intercept is 8, while the x-intercepts are -1 and 3.
The answer is B.

32. C

Observe the transformation involved in each option.

A. $y = f(x) \to y = f(-x) \to y = 1 + f(-x)$
Reflect about the y-axis.
Translate upwards by 1 unit.

B. $y = f(x) \to y = f(-x) \to y = -1 + f(-x)$
Reflect about the y-axis.
Translate downwards by 1 unit.

C. $y = f(x) \to y = -f(x) \to y = 1 - f(x)$
Reflect about the x-axis.
Translate upwards by 1 unit.

D. $y = f(x) \to y = -f(x) \to y = -1 - f(x)$
Reflect about the x-axis.
Translate downwards by 1 unit.

The answer is C.

33. D

We have $f(3) = 2$ and $g(3) = 1$.

A. ✗. $g(3) = -2f(3) + 2 = -2(2) + 2 = -2 \neq 1$

B. ✗. $g(3) = -2f(3) + 3 = -2(2) + 3 = -1 \neq 1$

C. ✗. $g(3) = -\frac{1}{2}f(3) + 3 = -1 + 3 = 2 \neq 1$

D. ✓. $g(3) = -\frac{1}{2}f(3) + 2 = -1 + 2 = 1$

34. D

$g(x) = f[-(x-2)]$

$\quad = f(2-x)$

$\quad = 2(2-x)^2 - 3(2-x)$

$\quad = 2x^2 - 5x + 2$

> Note that $(0,\ 0)$ and $(1,\ -1)$ lie on the graph of $y = f(x)$.
> The coordinates of the corresponding images under the transformation are $(2,\ 0)$ and $(1,\ -1)$ respectively.
> The function $g(x)$ should satisfy $g(2) = 0$ and $g(1) = -1$.
> Only option D satisfies this.

35. D

The graph of $y = g(x)$ can be obtained by reflecting the graph of $y = f(x)$ about the y-axis, and then translating to the left by 1 unit.

Reflect the graph of $y = f(x)$ about the y-axis.

$$y = f(x) \quad \rightarrow \quad y = f(-x)$$

Translate to the left by 1 unit.

$$y = f(-x) \quad \rightarrow \quad y = f[-(x+1)] = f(-x-1)$$

Thus, we have $g(x) = f(-x-1)$.

Alternative solution

The graph of $y = g(x)$ can be obtained by translating the graph of $y = f(x)$ to the right by 1 unit, and then reflecting about the y-axis.

Translate to the right by 1 unit.

$$y = f(x) \quad \rightarrow \quad y = f(x-1)$$

Reflect about the y-axis.

$$y = f(x-1) \quad \rightarrow \quad y = f(-x-1)$$

Thus, we have $g(x) = f(-x-1)$.

36. D

$g(x) = -(-x-1)^2 + 4$

$= -(x+1)^2 + 4$

A. ✗. The coefficient of x^2 is -1, which is negative.
The graph opens downwards.

B. ✗. Two graphs must intersect at a point on the y-axis.
y-intercept $= g(0) = -(0+1)^2 + 4 = 3$
They intersect at $(0,\ 3)$.

C. ✗. The equation of the axis of symmetry is $x = -1$.

D. ✓. $0 = -(x+1)^2 + 4$

$0 = -x^2 - 2x + 3$

$x = -3 \quad \text{or} \quad 1$

The graph of $y = g(x)$ cuts the x-axis at $(-3,\ 0)$ and $(1,\ 0)$.

37. A

Transform the graph according to the transformation sequence.

A.	$y = f(x)$	$\rightarrow$	$y = f(-x)$	$\rightarrow$	$y = f(-2x)$	$\rightarrow$	$y = f[-2(x-2)]$
B.	$y = f(x)$	$\rightarrow$	$y = f(-x)$	$\rightarrow$	$y = f[-(x-2)]$	$\rightarrow$	$y = f[-(2x-2)]$
C.	$y = f(x)$	$\rightarrow$	$y = f(2x)$	$\rightarrow$	$y = f[2(x-2)]$	$\rightarrow$	$y = f[2(-x-2)]$
D.	$y = f(x)$	$\rightarrow$	$y = f(x-2)$	$\rightarrow$	$y = f(-x-2)$	$\rightarrow$	$y = f(-2x-2)$

The answer is A.

38. A

Least value $2x - y$ occurs at the top left corner, $(0,\ 6)$.
Least value $= -6$

39. A

We have $P\,(0,\ 9)$, $Q\,(9,\ 6)$ and $R\,(12,\ 0)$.

$(x,\ y)$	$(0,\ 9)$	$(9,\ 6)$	$(12,\ 0)$	$(0,\ 0)$
$x + 2y - 5$	13	16	7	-5

Required value is 16.

40. D

Note that $q > p > 0$.

$px - qy$ is smaller when x is smaller and y is larger.

$px - qy$ attains its least value at the top left corner.

Coordinates of the top left corners are $(-p,\ q)$ and $(-q,\ -p)$.

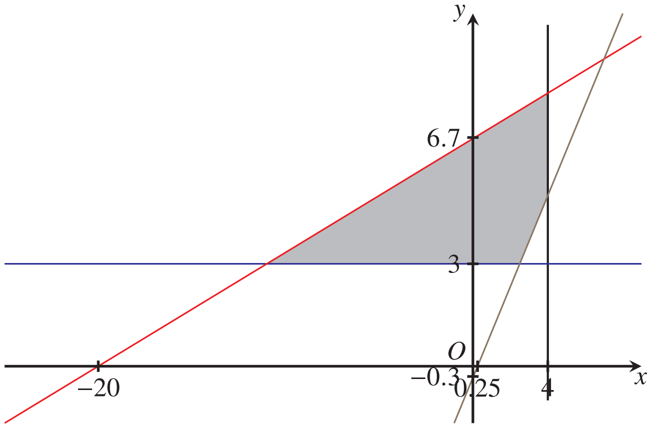
$(x,\ y)$	$(-p,\ q)$	$(-q,\ -p)$
$px - qy$	$-p^2 - q^2$	0

Since $-p^2 - q^2 < 0$, required point is $(-p,\ q)$.

41. C

Line	x-intercept	y-intercept
$x = 4$	4	
$y = 3$		3
$x - 3y + 20 = 0$	−20	6.7
$4x - 3y - 1 = 0$	0.25	−0.3

Sketch the solution region using the intercepts.



The value of $4y - 6x + 12$ is smaller when x is larger and y is smaller.

$4y - 6x + 12$ attains its least value at the bottom right corner, which is $(2.5,\ 3)$ or $(4,\ 5)$.

$(x,\ y)$	$(2.5,\ 3)$	$(4,\ 5)$
$4y - 6x + 12$	9	8

The least value is 8.

42. C

$10 - 2x + 3y$ is larger when x is smaller and y is larger.

$10 - 2x + 3y$ attains its greatest value at the top left corner.

Coordinates of the top left corner is $(1,\ 5)$.

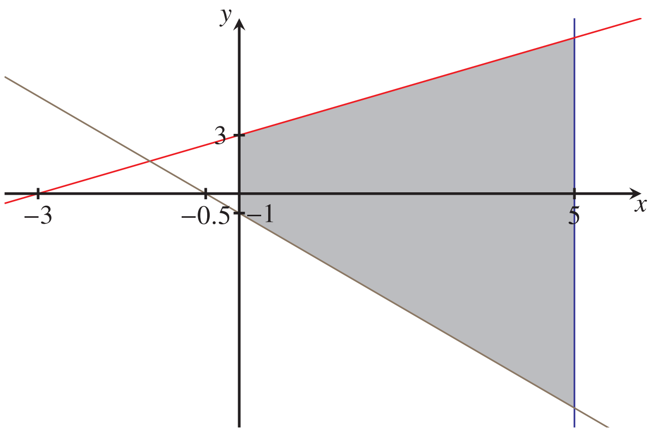
Required value $= 10 - 2(1) + 3(5)$

$= 23$

43. B

Line	x-intercept	y-intercept
$x = 0$	0	
$x = 5$	5	
$x - y = -3$	-3	3
$2x + y = -1$	-0.5	-1

Sketch the solution region using the intercepts.



The value of $3x - 4y + 12$ is smaller when x is smaller and y is larger.

$3x - 4y + 12$ attains its minimum value at the top left corner, which is $(0,\ 3)$ or $(5,\ 8)$.

$(x,\ y)$	$(0,\ 3)$	$(5,\ 8)$
$3x - 4y + 12$	0	-5

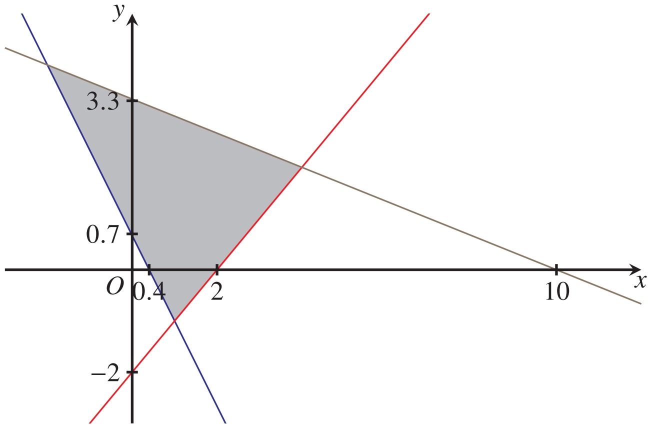
The least value is -5.

44. A

Evaluate the intercepts of the lines correct to 1 decimal place if necessary.

Line	x-intercept	y-intercept
$5x + 3y - 2 = 0$	0.4	0.7
$x - y - 2 = 0$	2	−2
$x + 3y - 10 = 0$	10	3.3

Sketch the graph of the system of inequalities using the intercepts.



Value of $2x + 3y + 1$ is smaller when x and y are smaller.

$2x + 3y + 1$ attains its minimum at the bottom left corners.

The coordinates of the bottom left corners are $(1, -1)$ and $(-2, 4)$.

(x, y)	$(1, -1)$	$(-2, 4)$
$2x + 3y + 1$	0	9

The least value is 0.

45. C

Label the inequalities as follows:

① $2x - y \le 0$

② $4x - y \ge 0$

③ $4x + y \le 24$

Lines	Coordinates	Check	$y - 3x + 10$
① and ②	(0, 0)	③ ✓	10
① and ③	(4, 8)	② ✓	6
② and ③	(3, 12)	① ✓	13

The greatest value is 13.

46. C

Greatest value of $x + 3y + 4$ occurs at top right corner.
Compare points A, B and C:

$(x,\ y)$	(4, 0)	(3, 2)	(0, 4)
$x + 3y + 4$	8	13	16

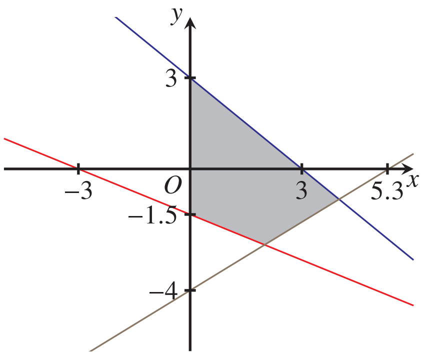
Required value is 16.

47. C

Sketch the graph using the intercepts.

Line	x-intercept	y-intercept
$x = 0$	0	
$x + y = 3$	3	3
$x + 2y + 3 = 0$	−3	−1.5
$3x - 4y - 16 = 0$	5.3	−4

The value of $4x + 2y + 15$ is smaller when x and y are small.
The least value is attained at the bottom left corners, (0, −1.5) or (2, −2.5).



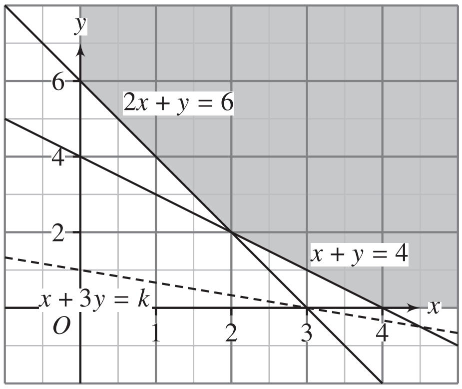
$(x,\ y)$	(0, −1.5)	(2, −2.5)
$4x + 2y + 15$	12	18

Required value = 12

48. B

The figure shows the solution region.

Draw the line $x + 3y = k$, where k is a constant.
$P = x + 3y$ attains its minimum at $(4,\ 0)$.
Required value $= 4 + 3(0) = 4$



49. B

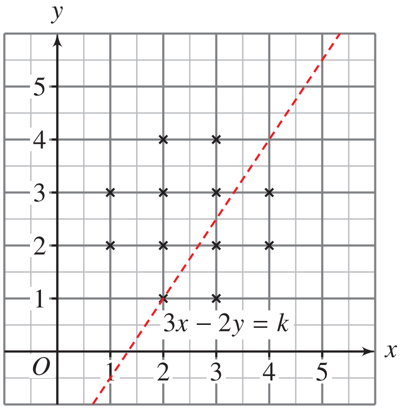
Coordinates of the vertices of the region P are $(7,\ -1)$, $(-5,\ -1)$ and $(1,\ 5)$.

$(x,\ y)$	$(7,\ -1)$	$(-5,\ -1)$	$(1,\ 5)$
$3x - 2y$	23	-13	-7

Required value is -13.

50. B

Draw the line $3x - 2y = k$, where k is a constant.



$3x - 2y$ attains its minimum at the point $(1,\ 3)$.
Required value $= 3(1) - 2(3) = -3$

51. B

Form the graph, we have $n > m > 0$.

Maximum value of $C = mx + ny$ occurs at the top right corners, $(m,\ n)$ or $(n,\ m)$.

$(x,\ y)$	$(m,\ n)$	$(n,\ m)$
$mx + ny$	$m^2 + n^2$	$2mn$

Take $n = 5$ and $m = 4$, we have $m^2 + n^2 > 2mn$.

Thus, C attains its maximum value at $(m,\ n)$.

52. B

$2x - y + 10$ is smaller when x is smaller and y is larger.

$2x - y + 10$ attains its least value at the top left corners.

Coordinates of the top left corners are $C\ (0,\ 30)$.

Required value $= 2(0) - (30) + 10$

$= -20$

53. C

$x - 2y + 10$ is greater when x is larger and y is smaller.

$x - 2y + 10$ attains its greatest value at the bottom right corner.

Coordinates of the bottom right corner (A) are $(40,\ 0)$.

Required value $= (40) - 2(0) + 10$

$= 50$

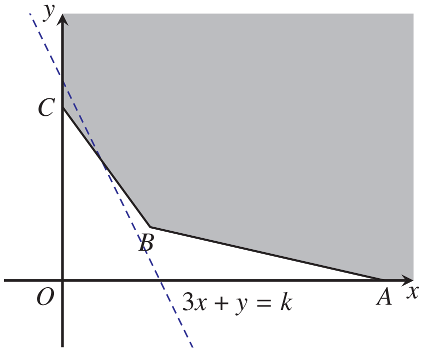
54. B

Draw the line $3x + y = k$, where k is a constant.

$3x + y$ attains its least value at $C\ (0,\ 26)$.

Required value $= 3(0) + 26$

$= 26$

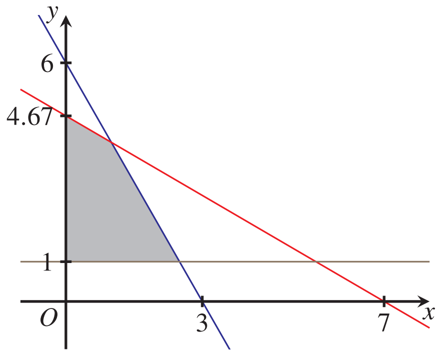


55. D

Straight line	x-intercept	y-intercept
$2x + y = 6$	3	6
$2x + 3y = 14$	7	4.67
$x = 0$	0	
$y = 1$		1

$4x + 3y + 4$ is larger when x and y are larger.

$4x+3y+4$ attains its maximum at the top right corners, $\left(0,\ \frac{14}{3}\right)$, $(1,\ 4)$ or $\left(\frac{5}{2},\ 1\right)$.



$(x,\ y)$	$\left(0,\ \frac{14}{3}\right)$	$(1,\ 4)$	$\left(\frac{5}{2},\ 1\right)$
$4x + 3y + 4$	18	20	17

Greatest value = 20

56. B

$32 - 2x - 3y$ is smaller when x and y are larger.

$32 - 2x - 3y$ attains its least value at the top right corners.

Coordinates of the top right corners are $B\ (6,\ 6)$.

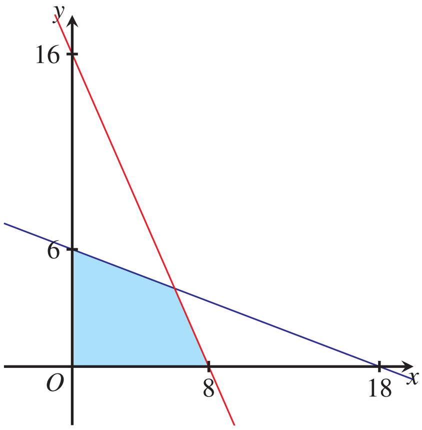
Required value $= 32 - 2(6) - 3(6)$

$= 2$

57. C

Straight line	x-intercept	y-intercept
$x+3y=18$	18	6
$2x+y=16$	8	16
$x=0$	0	
$y=0$		0

$3x-y+16$ is larger when x is larger and y is smaller.
$3x-y+16$ attains its maximum at the bottom right corner, $(8,\ 0)$.
Required value $= 3(8)-0+16=40$



58. A

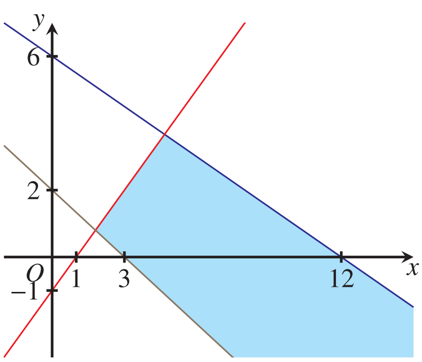
Evaluate all x- and y-intercepts of the corresponding straight lines.

Straight line	x-intercept	y-intercept
$2x+3y=6$	3	2
$-x-2y=-12$	12	6
$x-y=1$	1	-1

Value of $30x-15y+36$ attains its minimum at the top left corner , $\left(\frac{9}{5},\ \frac{4}{5}\right)$ or $\left(\frac{14}{3},\ \frac{11}{3}\right)$

$(x,\ y)$	$\left(\frac{9}{5},\ \frac{4}{5}\right)$	$\left(\frac{14}{3},\ \frac{11}{3}\right)$
$30x-15y+36$	78	121

Least value = 78



59. D

Maximum value of $3x - 2y + 15$ occurs at the bottom right corners, $B\ (3,\ 3)$ or $C\ (2,\ 0)$.

$(x,\ y)$	$B\ (3,\ 3)$	$C\ (2,\ 0)$
$3x - 2y + 15$	18	21

Maximum value = 21

END OF PAPER