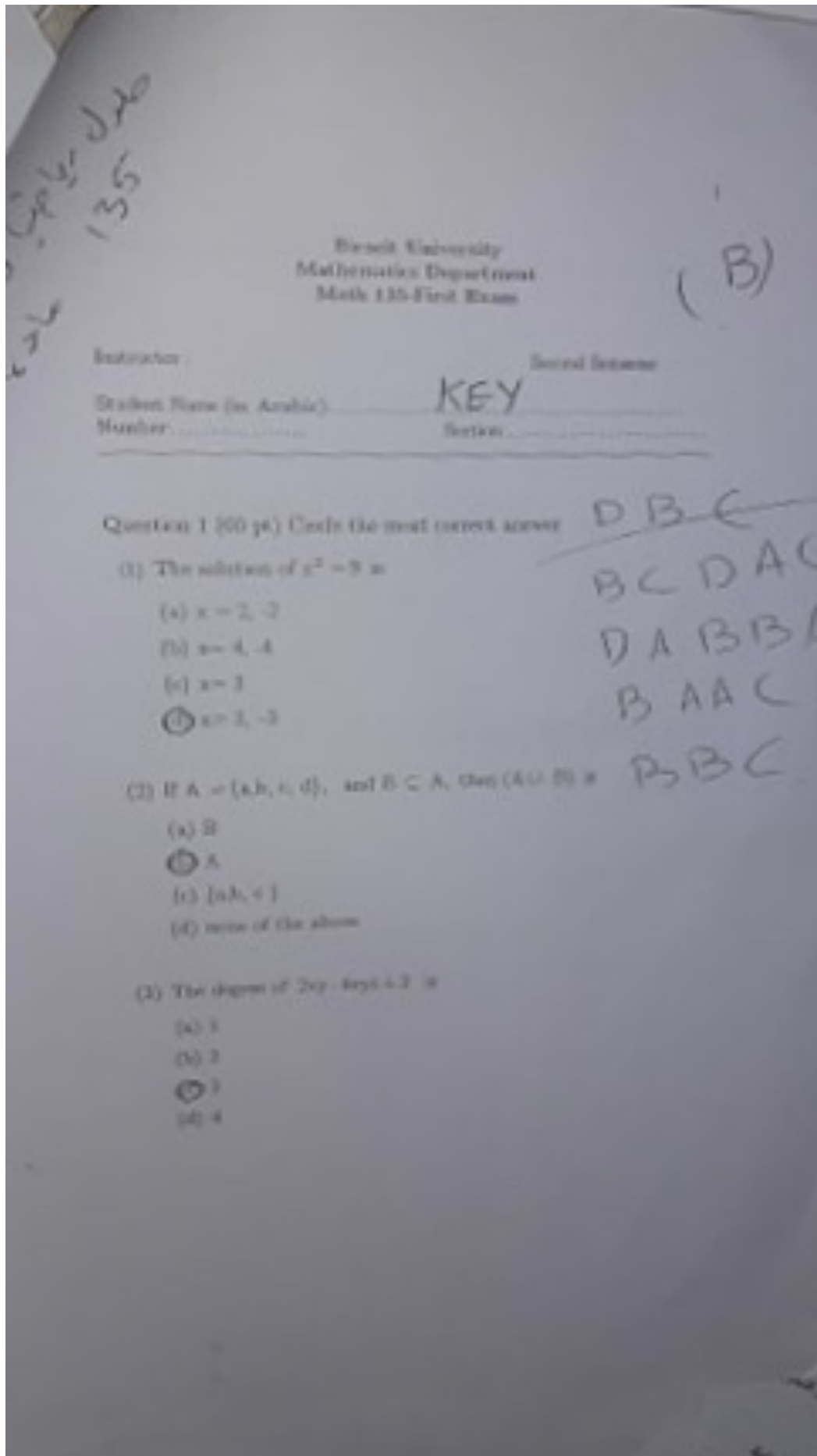


MATH1351
فورمات

By : Wessal Khatib



(9) The factor of $x^4 - 6x^2 + 9$ is

(a) $(x^2 - 3)(x^2 + 3)$

(b) $(x^2 + 3)^2$

(c) $(x^2 - 3)^2$

(d) $(x - \sqrt{3})^2 (x + \sqrt{3})^2$

(10) The solution of the system

$y - 2x = 4$

is

$-y + 2x = 1$

(a) $x = \frac{3}{2}, y = \frac{1}{2}$

(b) $x = 2, y = 1$

(c) $x = \frac{5}{2}, y = \frac{3}{2}$

(d) it has no solution.

(11) The lines

$L_1 : 2y - 3x = 2$

$L_2 : 4y - 6x = 5$ are

(a) identical.

(b) perpendicular.

(c) parallel.

(d) none of the above.

(12) $y^2 = 3x - 2$ is

(a) a function

(b) not a function

(13) The range of $y = x^2$ is

(a) $(-\infty, \infty)$

(b) $[-1, \infty)$

(c) $[0, \infty)$

(d) $[-1, 1]$

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- (a) $(x^2 - 2)(x^2 + 2)$
- (b) $(x^2 + 2)^2$
- (c) $(x^2 - 2)^2$
- (d) $(x - \sqrt{2})^2 (x + \sqrt{2})^2$

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$$L1 : 2y + 3x = 2$$

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- (a) identical.
- (b) perpendicular.
- (c) parallel.
- (d) none of the above.

(12) $y^2 = 3x - 2$ is

- (a) a function
- (b) not a function

(13) The range of $y = x^3 - 1$ is

- (a) $(-\infty, \infty)$
- (b) $[-1, \infty)$
- (c) $[1, \infty)$
- (d) $[-1, 1]$

(14) The domain of $y = \sqrt{x^2 - 1}$ is

- (a) $[-3, 1]$
- (b) $[-1, 1]$
- (c) $(-\infty, -1] \cup [1, \infty)$
- (d) all the real numbers.

(15) $(2^3 x^{-4} y^5)^{-2} =$

- (a) $\frac{x^8}{64y^{10}}$
- (b) $x^8 y^{10}$
- (c) $8x^8 y^{-10}$
- (d) none of the above.

(16) $\sqrt{5x^3 y^3} \sqrt{5x^1 y^{-1}} =$

- (a) $4 x^3 y$
- (b) $2y\sqrt{x^2}$
- (c) $5y x^2$
- (d) the multiplication is undefined.

(17) The remainder that result when $(x^3 - 64)$ is divided by $(x - 4)$ is

- (a) $x - 3$
- (b) $x^2 + 4x + 16$
- (c) 0
- (d) none of the above

(4) The equation of the line that passes through the point (1,4) with slope = -2 is:

(a) $y = -x + 5$

(b) $y = -2x + 6$

(c) $y = 4$

(d) none of the above.

(5) The slope of the line $(3y - 3) = -(x + 1)$ is

(a) $\frac{2}{3}$

(b) -2

(c) $-\frac{1}{3}$

(d) -1

(6) The x-intercept of $y + 5 = -4x + 3$ is

(a) -2

(b) -1

(c) $\frac{1}{2}$

(d) $-\frac{1}{2}$

(7) The y-intercept of the above equation is

(a) -2

(b) -1

(c) $\frac{1}{2}$

(d) $-\frac{1}{2}$

(8) $(4m^4n^2 + m^3n^3) \div (n^2m^2) =$

(a) $2m^2n + mn$

(b) $2m^2$

(c) $4m^2 + mn$

(d) none of the above.

Birzeit University
Mathematics Department
Math 135-First Exam

(A)

Instructor : _____ Second Semester

Student Name (in Arabic):.....
Number:..... Section:.....

KEY

Question 1 (60 pt) Circle the most correct answer

(1) The solution of $x^2 + 3 = 12$ is

- (a) $x = 2, -2$
- (b) $x = 4, -4$
- (c) $x = 3$
- (d) $x = 3, -3$

DAD
AAA BB
DD C BC
CA CC
CCC

(2) If $A = \{a, b, c, d\}$, and $B \subseteq A$, then $(A \cap B)$ is

- (a) B
- (b) A
- (c) $\{a, b, c\}$
- (d) none of the above

(3) The degree of $2xy^3 - 4xyz + 3$ is

- (a) 1
- (b) 2
- (c) 3
- (d) 4

(18) $2(6^{-1} + 6^{-1}) =$

(a) $2(6^{-3})$

(b) $14(6^{-2})$

(c) $\frac{2}{3}$

(d) 18

(19) The interval notation of $x \geq 6$ is

(a) $[-6, 2)$

(b) $(-\infty, 6]$

(c) $[6, \infty)$

(d) none of the above.

(20) $\left(\frac{2x^3}{3x^{-5}}\right)^2 =$

(a) $\frac{9}{4x^{16}}$

(b) $\frac{3}{5x^{12}}$

(c) $\frac{4x^{16}}{9}$

(d) $\frac{3x^{12}}{5}$

(4) The equation of the line that passes through the point $(1,0)$ with slope $= -1$ is:

- (a) $y = -x + 1$,
- (b) $y = -2x + 6$
- (c) $y = 4$
- (d) none of the above.

(5) The slope of the line $(-3y - 3) = -2(x + 1)$ is

- (a) $\frac{2}{3}$
- (b) -2
- (c) $-\frac{1}{3}$
- (d) -1

(6) The x-intercept of $y - 5 = 4x + 3$ is

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

(7) The y-intercept of the above equation is

- (a) -2
- (b) 8 .
- (c) $\frac{1}{2}$
- (d) $-\frac{1}{2}$

(8) $(4m^4n^2 + m^3n^3) \div (2n^2m^3) =$

- (a) $2m^2n + mn$.
- (b) $2m + \frac{n}{2}$
- (c) $4m^2 + mn$
- (d) none of the above.

(14) The domain of $y = \sqrt{1 - x^2}$ is

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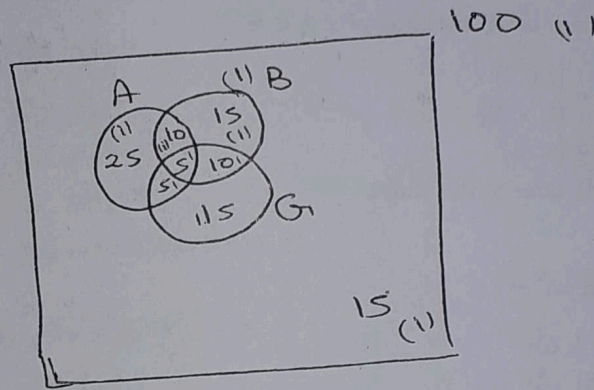
(17) The remainder that result when (x^3-27) is divided by $(x-3)$ is

- (a) $x-3$
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- (c) 0
- (d) none of the above

Question 3 (20 pt)

In a sample of 100 encouragers, It is found that 40 person encourage Brazil (B), 35 encourage Germany (G), 45 encourage Argentina (A), and 10 person encourage both G, and B, but not A, 15 encourage G only, 25 encourage A only, and 5 encourage the three teams.

(a) Draw the Venn diagram that represents the problem.



B	G	10
B	A	10
A	G	5

(b) How many person encourage Brazil only.

15 2 pt

(c) How many person encourage Argentina or Germany.

70 2 pt

(d) How many person in $(G \cap B^c)$.

\Rightarrow in $G - B = 35 - 15 = 20$ in $G \cap B^c$ 3 pt

(e) How many person encourage neither B nor A nor G.

encourage 15 2 pt

(f) How many person in B or A or G.

85 2 pt

(B U A U G)