MATHS

BOOKS - CENGAGE

SET THEORY AND REAL NUMBER SYSTEM

Examples

1. State which of the following statement are true and which ones are false . Justify your answer .

(i) $21 \in \{x \mid x$ has exactly four positive factors $\}$

(ii) $64 \in \{y \mid$ the sun of the all the positve factors of y is 2y $\}$

(iii) $2 \in \left\{x \mid x^4 - 3x^3 + 4x^2 - 5x + 6 = 0\right\}$

(iv) 23562 $\in \{y \mid y$ is divisible by 9$\}$

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2. Are the following pairs of sets equal ? (i) A={x | x is prime factor of 6 } B= {x |x is a solution of $x^2 - 5x + 6 = 0\}Mlbtr$ (ii) A={x|y is a letter in the word REPLACED}, B= { y is a letter in the word PARCELED } (iii) A= { x| x is a natural number $x > 1\}$ B= {x|x is natural number $x \geq 1\}$

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3. Determine whether the statement is true or false. If it is true, prove it. If ir false, give an example.

If A $\not\subset$ B and B $\not\subset$ C, then A $\not\subset$ C

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4. If $x \in A$ and $A \not\subset B$, then $x \in B$. Is this statement true ?

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5. Consider the following sets:

A= set ofnaturai numbers which are multiples of 2

B= set ofnaturai numbers which are multiples of 3

C= set ofnaturai numbers which are multiples of 5

Then find the following set

$(i)A \cup B(ii)B \cup C(iii)A - B(iv)B - C(v)A \cap C(vi)A \cap B \cap C(vii)(A \cup$

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6. If A- B = A and B- A=B , then what can we consclude ?

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7. If $A \cap B = A \cup B$ then what can we conclude ?

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8. Show that $A \cap B = A \cap C$ need not imply $B = C$.

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9. Consider the following sets:

A = set all rectangles in the same plane

B = set all squares in the same plane

C = set all parellegrams in the same plane

Find the following sets :

$(i) A - B (ii) C - A (iii) A \cap C (iv) B \cap C (v) B \cup C (Vi) A \cap B \cup C$

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10. Show that if $A \subset B$, then $C - B \subset C - A$.

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11. Assume that $P(A) = P(B)$. Show that $A = B$

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12. If sets A= (-3,2) and B= (-1, 5) then find the following sets :

A. $A \cap B$

B. $A \cup B$

C. A-B

D. B- A

Answer:

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13. In a group of 500 people, 350 speak Hindi and 300 speak English. It is given that each person speaks at least one language.

(i) How many people can speak both Hindi and English?

(ii) How many people can speak Hindi only?

(iii) How many people can speak English only?

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14. In a group of 50 students, the number of students learning - French, English, Sanskrit were found to be as follows: French = 17, English = 13, Sanskrit = 15, French and English = 09, English and Sanskrit = 4, French and Sanskrit = 5, English, French and Sanskrit = 3. Find the number of students who are learning at?

French only

(ii) English only

(iii) Sanskrit only

(iv) English and Sanskrit but not French

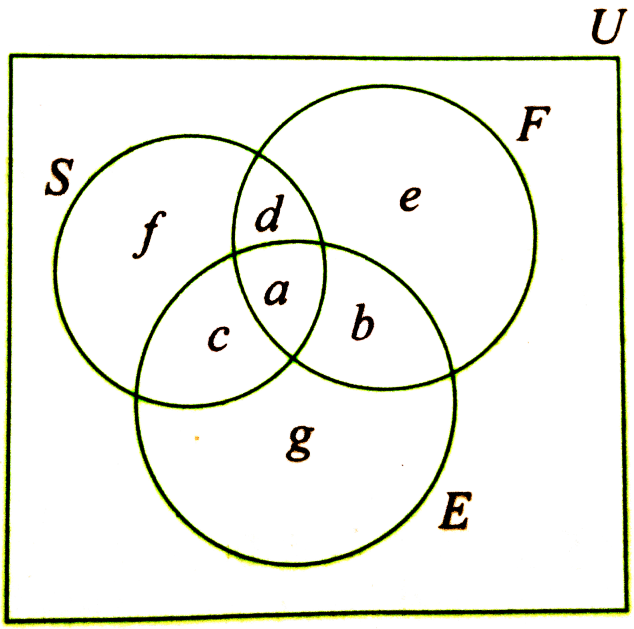
(v) French and Sanskrit but not English

(vi) French and English but not Sanskrit

(vii) at least one of the three languages

(viii) none of the three languages

(ix) exactly one language (X) exactly two languages



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15. Solve the following inequlaities ,Write the solution in the from of intervals (i) $3x \geq 18$

(ii) $2x + 17 < 3$

$(iii) 7 - 4x > -17$

(iv) $\frac{x}{7} + 3 \leq -2$

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16. Solve the following inequlaities

$7x + 15 \geq 9 - 4x$

$-5 \leq \frac{2 - 3x}{4} \leq 9$

$5x - 6 \leq 4 \text{ and } 7 - 3x \geq 2x$

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17. Abhinav obtained 65 and 80 marks in first two unit test .Find the minimum marks he should get in the third test of have an average of at least 70 marks.

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18. Solve $\sqrt{(x-5)} - \sqrt{9-x} > 0, x \in Z$.

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19. Solve $\sqrt{x-2} \geq -1$.

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20. Solve $\sqrt{x-1} > \sqrt{3-x}$.

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21. Solve $x\sqrt{x} \geq \sqrt{x} - 3$

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22. Find the value of x^2 for the given values of x.

$(i)x < 3(ii)x > -1(iii)x \geq 2(iv)x < -1$

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23. Find all the possible the value of the following expression. $\sqrt{x^2-4}$

(ii) $\sqrt{9-x^2}$ (iii) $\sqrt{x^2-2x+10}$

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24. Solve $\left(x^2-4\right)\sqrt{x^2-1}<0$.

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25. Find the values of 1/x for the given values of x.

$(i)x>3(ii)x<-2(iii)x\in(-1,3)-\{0\}$

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26. Find all possible values of the following expressions :

$(i)\frac{1}{x^2+2}(ii)\frac{1}{x^2-2x+3}(iii)\frac{1}{x^2-x-1}$

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27. Solve $x^2 - x - 2 > 0$.

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28. Solve $x^2 - x - 1 < 0$

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29. Solve $(x-1)(x-2)(1-2x) > 0$.

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30. Solve $\frac{2}{x} > 3$

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31. Solve $\frac{x-2}{x+2} > \frac{2x-3}{4x-1}$.

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32. Solve $x > \sqrt{(1-x)}$.

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33. Solve $\frac{2}{x^2-x+1} - \frac{1}{x+1} - \frac{2}{x^3+1} \geq 0$.

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34. Solve $x(x+2)^2(x-1)^5(2x-3)(x-3)^4 \geq 0$.

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35. Solve $x(2^x-1)^{3^x-9}\hat{}\,5(x-3) < 0$.

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36. Solve $\left(x^2-x-1\right)\left(x^2-x-7\right)<-5$.

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37. Solve the following :

(i) $|x|=5$

(ii) $x^2-|x|-2=0$

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38. Find the value of x for which following expressions are defined:

$\frac{1}{\sqrt{x-|x|}}$ (ii) $\frac{1}{\sqrt{x+|x|}}$

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39. Find all the possible values of following expressions :

(i) $\frac{|x|}{x}+\frac{|y|}{y}$

(ii) $\frac{|x|}{x}+\frac{|y|}{y}+\frac{|z|}{z}$

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40. Solve $|x|=x^2-1$.

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41. (i) For $2<x<4$, find the values of $|x|$.

(ii) For $-3 \leq x \leq -1$ find the values of $|x|$.

(iii) For $-3 \leq x \leq 1$, find the values of $|x|$.

(iv) For $-5<x<7$, find the values of $|x-2|$.

(iv) For $1 \leq x \leq 5$, find the values of $|2x-7|$.

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42. Solve $|x-2|=1$

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43. Find the values of a for which the equation $||x-2|+a|=4$ can have four distinct real solutions.

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44. Solve the following :

(i) $|x-2|=(x-2)$ (ii) $|x+3|=-x-3$

(iii) $\left|x^2-x\right|=x^2-x$ (iv) $\left|x^2-x-2\right|=2+x-x^2$

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45. Solve $1-x=\sqrt{x^2-2+1.}$

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46. Solve $|3x-2|=x$.

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47. Solve $\sqrt{x+3-4\sqrt{x-1}}+\sqrt{x+8-6\sqrt{x-1}}=1$

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48. Prove that $\sqrt{x^2+2x+1}-\sqrt{x^2-2x+1}=$

$\{-2, x<-1, 2x, -1\leq x\leq 12, x>1\}$

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49. For $x\in R$, find all possible values of $|x-3|-2$ (ii) $4-|2x+3|$

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50. Find the possible values of $\sqrt{|x|-2}$ (ii) $\sqrt{3-|x-1|}$ (iii) $\sqrt{4-\sqrt{x^2}}$

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51. Solve $|x-3|+|x-2|=1$.

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52. Solve $x^2-4|x|+3<0$.

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53. Solve $0<|x|<2$

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54. Solve $|3x - 2| < 4$.

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55. Solve $1 \leq |x - 2| \leq 3$

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56. Solve $0 < |x - 3| \leq 5$

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57. Solve $||x - 1| - 2| < 5$

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58. Solve $|x - 3| \geq 2$.

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59. $||x| - 3| > 1.$

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60. Solve $\left|\frac{x-3}{x+1}\right| \leq 1.$

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61. Solve $\left|1 + \frac{3}{x}\right| > 2$

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62. Solve $|x| + |x - 2| = 2.$

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63. Solve $|2x-3|+|x-1|=|x-2|$.

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64. Solve $x^2+x-4|=|x^2-4|+|x\ |$.

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65. If $|s\in x+\cos x|=|s\in x|+|\cos x|(s\in x,\cos x\neq 0)$, then in which quadrant foes x lie?

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66. Is $|tanx+\cos x|<|tanx|+|\cot x|$ true for any x? If it is true, then find the values of x.

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67. Solve $\left|\frac{x+1}{x}\right| + |x+1| = \frac{(x+1)^2}{|x|}$.

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68. Solve $|x^2 - 2x| + |x-4| < |x^2 - 3x + 4|$.

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69. Solve $|2^x - 1| + |4 - 2^x| < 3$.

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70. Find the total number of integer n such that $2 \leq n \leq 2000$ and H.C.F. of n and 36 is 1.

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71. If A = {b, c, e, g, h}, B = {a, c, d, g, i} and C = {a, d, e, g, h}, then show that $A-(B \cap C)=(A-B) \cup(A-C)$.

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72. For sets A,B, and C using Venn diagram , check if A-(B-C) = (A-B-C)

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73. Suppose $A_1, A_2 \ldots . A_{30}$ are thirty sets each having 5 elements and $B_1 B_2 \ldots . B_n$ are n sets each having 3 elements ,Let $\bigcup_{i=1}^{30} A_1=\bigcup_{j=1}^{n} B_j=s$

and each element of S belongs to exactly 10 of the A_1 and exactly 9 of the

value of n.

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74. Let $a > 2$ be a constant. If there are just 18 positive integers satisfying the inequality $(x-a)(x-2a)\left(x-a^2\right) < 0$, then find the value of a.

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75. Find the set of all possible real value of a such that the inequality $(x-(a-1))\left(x-\left(a^2+2\right)\right) < 0$ holds for all $x \in (-1, 3)$.

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76. Find all possible values of $\frac{x^2+1}{x^2-2}$.

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77. Solve $\left(\frac{1}{3}\right)^{\frac{|x+2|}{2-|x|}} > 9$.

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78. Solve $|x-1|+|x-2| \geq 4$.

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79. Solve $|x+1|+|2x-3|=4$.

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80. Solve $\frac{x}{x+2} \leq \frac{1}{|x|}$

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Exercise 1 1

1. Examine whether A= { x:x is a positive integer divisible by 3} is a subset of B= { x:x is a multiple of 5, x∈N }.

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2. If x = {1,2,3 ...., 10 } and a represents any elements of X then write the follwing sets containing all the elements satisfing the given conditions

$a \in X but a^2 \in X$

$a \in X but \frac{a}{2} \in X$

a is factor of 24

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3. Write down all the subsets of the following sets :

(i) {a}

(b) {a, b}

(c) $\{1, 2, 3\}$

(d) ϕ

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4. If the number of elements in the power set of set A is 128 then find the number of elements in the set A .

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5. If $A \subset B$and C, then $A \in C$ is this statement true ?

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6. Let $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}, A = \{1, 2, 3, 4\}, B = \{2, 4, 6, 8\}$ and $C = \{3,$

Find :

(i) A'

(ii) B'

(iii) $(A \cup C)'$

(iv) $(A \cap B)'$

(v) $(A')'$

(vi) $(B - C)'$.

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7. If $A - B = \phi\phi$ and $B - A = \phi$ then what can we conclude ?

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8. Is it true that for any sets A and B, $P(A) \cup P(B) = P(A \cup B)$? Justify your answer.

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9. Let A and B be sets. If $A \cap X = B \cap X = \phi$ and $A \cup X = B \cup X$ for some set X, show that A=B.

(Hints $A = A \cap (A \cup X)$, $B = B \cap (B \cup X)$ and use distributive law)

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10. If A= [-4 , 1) and B =[0,3), then find the following

(A) $A \cap B (b) A \cup B, (c) A - B (d) B - A (e) (A \cup B) (f) (A \cap B)$

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11. In a survey conduced on 800 students of a school , 250 students were found to like tea and 300 like coffee , 150 like both tea and coffee .Find how many students like neither tea nor coffee ?

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12. Out of 100 students, 15 passed in English, 12 passed in Mathmatics, 8 in Science, 6 in English and Mathematics, 7 in Mathematics and Science , 4 in English and Science, 4 in all the three. Find how many passed

(i) in English and Mathematics but not in Science.

(ii) in Mathematics and Science but not in English.

(iii) in Mathematics only.

(iv) in more than one subject only.

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Exercise 1 2

1. Find the values of x which satisfy the following inequalities simultaneously:

(a) $-3 < 2x - 1 < 19$

(b) $-1 \leq \frac{2x+3}{5} \leq 3$

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2. The longest side of a triangle is 3 times the shortest side and the third side is 2 cm shorter than the longest side. If the perimeter of the triangle is at least 61 cm, find the minimum length of the shortest side.

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3. Find the values of 1/x for the following values of x (2,5) (b) [-5 ,-1] (c) $(3, \infty)$ (d) $(-3, \infty)$ (e) $(-\infty, 4)$

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4. Find the values of 1/x for the following values of x (2,5) (b) [-5 ,-1] (c) $(3, \infty)$ (d) $(-3, \infty)$ (e) $(-\infty, 4)$

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5. Find all possible values (range) of the following quadratic expressions when $x \in R$ and when $x \in [-3, 2]$

(a) $4x^2 + 28x + 41$

(b) $1 + 6x - x^2$

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6. Find all possible values of expressions $\frac{2+x^2}{4-x^2}$

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7. Solve $\frac{\sqrt{x-1}}{x-2} < 0$

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8. Solve $\sqrt{x-2} \leq 3$

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Exercise 1 3

1. Solve $\frac{x(3-4x)(x+1)}{2x-5} < 0$

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2. Solve $\frac{(2x+3)(4-3x)^3(x-4)}{(x-2)^2x^5} \leq 0$

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3. Solve $\frac{(x-3)(x+5)(x-7)}{|x-4|(x+6)} \leq 0$

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4. Solve $\frac{5x+1}{(x+1)^2} < 1$

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5. Number of integral solutions of $\frac{x+2}{x^2+1} > \frac{1}{2}$ is

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6. The solution of the inequation $4^{-x+0.5} - 7.2^{-x} < 4, x \in R$ is

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7. Solve $\frac{x^4}{(x-2)^4} > 0$

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8. Solve $\frac{6x^2 - 5x - 3}{x^2 - 2x + 6} \leq 4$

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9. Sove $\frac{(x+2)(x^2 - 2x + 1)}{-4 + 3x - x^2} \geq 0$

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10. solve $\sqrt{x+2} \geq x$

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11. Solve $\sqrt{x-2} \geq -1$.

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12. The number of integral value of x satistying `sqrt(x^2+10 x-16)

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13. Find all the possible values of $f(x) = \frac{1-x^2}{x^2+3}$

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Exercise 1 4

1. Which is the following is always true ?

(a) If $a < b, \quad \text{then} \quad a^2 < b^2$

(b) If $a < b \text{then} \quad \frac{1}{a} > \frac{1}{b}$

(c) If $a < b, \quad \text{then} \quad |a| < |b|$

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2. Which of the following equations has maximum number of real roots ?

A. $x^2 - |x| - 2 = 0$

B. $x^2 - 2|x| + 3 = 0$

C. $x^2 - 3|x| + 2 = 0$

D. $x^2 + 3|x| + 2 + 0$

Answer: c

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3. Find the number of solution of the system of equation x+2y=6 and |x-3|=y

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4. Find the values of x for which the follwing function is defined: $f(x) = \frac{\sqrt{1}}{|x-2| - (x-2)}$

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5. Find $f'(x)$ if $f(x) = \sqrt{x^2+1}$

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6. Solve $\left|\frac{x+2}{x-1}\right| = 2$

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7. Solve |x|= 2x-1

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8. Solve $|2^x - 1| + |2^x + 1| = 2$

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9. Solve $\left|x^2 + 4x + 3\right| = x + 1$

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10. Solve |4-|x-1||=3

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11. Solve |x-1|-|2x-5|=2x

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Exercise 1 5

1. If $\left|x^2-7\right| \leq 9$ then find the values of x

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2. Solve $||x-2|-3|<5$

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3. Which of the following is / are true ?

If |x+y|=|x|+|y| then points (x,y) lie in 1st or 3rd quadrant or any of the x-axis of y axis

If $|x+y|<|x|+|y|$ then points (x,y) lie in 2nd or 4th quadrant.

(c) If |x-y|=|x|+|y| then points (x,y) lie in 2nd or 4th quadrant.

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4. Solve $5 - |2x - 3| \geq 0$

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5. Solve $|x^2 - x - 2| + |x + 6| = |x^2 - 2x - 8|$

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6. Solve $|x^2 + x - 6| < 6$

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7. Solve $|x| + |\frac{4 - x^2}{x}| = |\frac{4}{x}|$

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8. Solve $\frac{1}{|x|-3} < \frac{1}{2}$

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9. Solve $|x-\pi| + \left|x^2-\pi^2\right| \leq 0$

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10. Solve $\left|1 - \frac{|x|}{1+|x|}\right| \geq \frac{1}{2}$

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11. Solve $\frac{|x-1|}{x+2} > 1$

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12. Solve $\left|x^2-1\right| + x^2 - 4\,| \; > 3$

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Exercises

1. Let F_1 be the set of parallelograms, F_2 the set of rectangle , F_3 the set of rhombuses, F_4 the set of squares and F_5 the set of trapeziums in a plane. Then, F_1 may be equal to

A. $F_2 \cap F_3$

B. $F_3 \cap F_4$

C. $F_2 \cup F_5$

D. $F_2 \cup F_3 \cup F_4 \cup F_1$

Answer: D

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2. If n (A) =3 ,n(B)=6 and $A \subseteq B$ .Then the number of elements in $A \cup B$ is equal to

A. 3

B. 9

C. 6

D. None of these

Answer: C

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3. If set A and B are defined as

$$A = \left\{(x, y) \mid y = \frac{1}{x}, 0 \neq x \in R\right\}, B = \{(x, y) \mid y = -x, x \in R, \}.$$

Then

A. $A \cap B = A$

B. $A \cup B = B$

C. $A \cup B = \phi$

D. $A \cup B - A$

Answer: C

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4. Two sets have m and k elements. If the total number of subsets of the first set is 112 more than that of the second set, find the values of m and k.

A. 18

B. 28

C. 32

D. 36

Answer: B

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5. Let A and B be two non empty subsets of a set X such that A is not a subset of B then

A. A is a subset of complement of B

B. B is a subset of A

C. A and B are disjoint sets

D. A and complement of B are non-disjoint sets

Answer: D

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6. If a N = $\{ax : x \in N\}$ then the set $4N \cap 6N$ is

A. 8N

B. 10 N

C. 12 N

D. None of these

Answer: C

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7. The set $(A \cap B') \cup (B \cap C)$ equals

A. $A' \cup B \cup C$

B. $A' \cup B$

C. $A' \cup C$

D. $A' \cap B$

Answer: B

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8. For sets $(A \cup B) \cup (A \cap B)$equals

A. A'

B. B'

C. A

D. None of these

Answer: D

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9. The set $(A \cap B') \cup (B \cap C)$ equals

A. $A \cup B \cup C$

B. $A \cap B \cap C$

C. $A \cup (B \cap C)$

D. $A \cap (B \cup C)$

Answer: B

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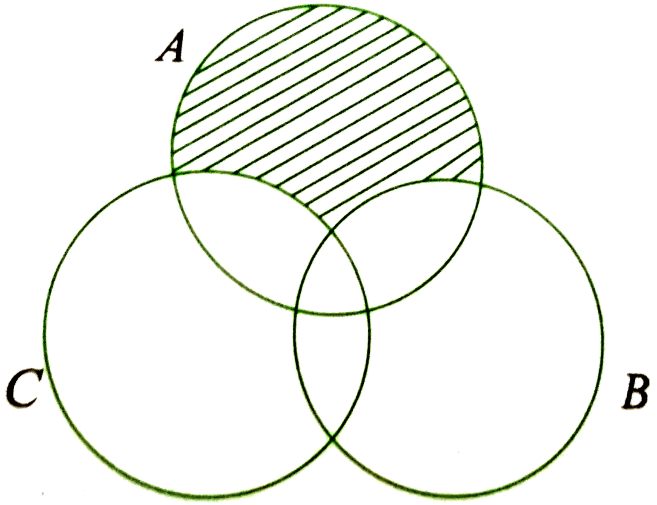
10. The shaded region in the given figure is



A. $A \cap (B \cup C)$

B. $A \cup (B \cap C)$

C. $A \cap (B - C)$

D. $A - (B \cup C)$

Answer: D

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11. Which is the simplified representation of $(A' \cap B' \cap C) \cup (B \cap C) \cup (A \cap C)$ where A,B and C are subsets of set X ?

A. A

B. B

C. C

D. $X \cap (A \cup B \cup C)$

Answer: C

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12. In statistical survey of 1003 families has neither a radio nor a TV, 794 families in that group having both a radio and a TV is

A. 36

B. 41

C. 32

D. None of these

Answer: B

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13. A survey shows that 63 % of the pepole watch a news channel whereas , 76 % watch an entertiament channel at a particular time If X% of the pepole watch both types of channels , then

A. x= 35

B. $x \geq 63$

C. $39 \leq x \leq 63$

D. x=39

Answer: C

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14. In a town of 10,000 families it was found that 40% family buy newspaper A, 20% buy newspaper B and 10% families buy newspaper C, 5% families buy A and B, 3% buy B and C and 4% buy A and C. If 2%families buy all the three newspapers, then find the number of families which buy A only

A. 3100

B. 3300

C. 2900

D. 1400

Answer: B

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15. Complete solution set of inequlaity $\frac{(x+2)(x+3)}{(x-2)(x-3)} \leq 1$

A. $(-\infty, 0)$

B. $(-\infty, 0] \cup (2, 3)$

C. [2,3]

D. $(-\infty, 2) \cup (3, \infty)$

Answer: B

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16. The number of intergal values of x if $5x - 1 < (x + 1)^2 < 7x - 3$ is

A. 0

B. 1

C. 2

D. 3

Answer: B

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17. If set A $= \left\{ x \mid \frac{x^2(x-5)(2x-1)}{(5x+1)(x+2)} < 0 \right\}$ and Set $B = \left\{ x \mid \frac{3x+1}{6x^3+x^2-x} > 0 \right\}$ then $A \cap B$ does not contain

A. (1,4)

B. (5,11)

C. $\left(-\frac{3}{2}, \frac{-1}{2} \right)$

D. None of these

Answer: B

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18. Number of intergers satisfying the inequality

$x^4 - 29x^2 + 100 \leq 0$is

A. 2

B. 4

C. 6

D. 8

Answer: D

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19. If $n > 0$ and exactly 15 integers satisfying (x+6)(x-4) (x-5) $(2x - n) \leq 0$ then sum of digits of the least possible value of n is

A. 10

B. 12

C. 14

D. 16

Answer: D

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20. The set of all x satisying the inequility $\frac{4x-1}{3x+1} \geq 1$ is

A. $[1, 3] \cup (5, \infty)$

B. $(1, 3) \cup (5, \infty)$

C. $(-\infty, 1) \cup (5, \infty)$

D. None of these

Answer: A

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21. The complete solution set of inequality $\frac{(x-5)^{1005}(x+8)^{1008}(x-1)}{x^{1006}(x-2)^3(x-3)^5(x-6)(x+9)^{1010}} \leq 0$

A. $(-\infty, -9) \cup (-8, 0) \cup (0, 1) \cup (2, 3) \cup [5, 6]$

B. $(-\infty, -9) \cup (-9, 0) \cup (0, 1) \cup (2, 3) \cup [5, 6)$

C. $(-\infty, -9) \cup (-9, 0) \cup (0, 1] \cup (2, 3) \cup [5, 6)$

D. $(-\infty, 0) \cup (0, 1] \cup (2, 3) \cup [5, 6)]$

Answer: C

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22. Sum of solution of the equation $|x|^3 - 4|x|^2 + 3|x| = 0$ is

A. 4

B. 3

C. 0

D. 1

Answer: C

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23. Number of intergral roots of $|x - 1|\left|x^2 - 2\right| = 2$ is

A. 0

B. 1

C. 2

D. 3

Answer: D

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24. The solution set of the inequlity $\frac{|x-2|-x}{x} < 2$ is

A. (0,1)

B. [0,2]

C. $(-\infty, 0) \cup (1, \infty)$

D. None of these

Answer: C

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25. Number of solutions of the equation $|2-|x|\ |\ |=x+4$ is

A. 0

B. 1

C. 2

D. Infinite

Answer: B

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26. Number of intergal values of x satisfying the inequality $\frac{x^2+6x-7}{|x+2||x+3|}<0$ is

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27. If $-4 \leq x < 2$ then ||x+2|-3 lies in the inerval

A. (1,3]

B. [1,3]

C. [0,3]

D. $[0, \infty)$

Answer: C

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28. Complete set of values of x satisfying inequality $||x-1|-5| < 2x-5$ is

A. $(5/2, \infty)$

B. $(11/3, \infty)$

C. $(-1, \infty)$

D. $(-\infty, 1/3)$

Answer: B

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29. If $\left|x^2-2x+2\right|-\left|2x^2-5x+2\right|=\left|x^2-3x\right|$ then the set of values of x is

A. a.$(-\infty,0]\cup[3,0)$

B. b.$\left[0,\frac{1}{2}\right]\cup[2,3]$

C. c.$(-\infty,0]\cup\left[\frac{1}{2},2\right]\cup[3,\infty)$

D. d.$[0,2]\cup[3,\infty)$

Answer: B

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30. The complete solution set of the equation $\left|x^2-5x+6\right|+\left|x^2+12x+27\right|=17x+21|$ is

A. $x \in [-9, 3]$

B. $x \in [-3, 2) \cup (2, 3]$

C. $x \in [-9, -3] \cup [2, 3]$

D. $x \in (-2, 3)$

Answer: C

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Archieves

1. If A,B and C are three sets such that $A \cap B = A \cap C$ and $A \cup B = A \cup C$ then

A. A=B

B. A=C

C. B=C

D. $A \cap B = \phi$

Answer: C

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