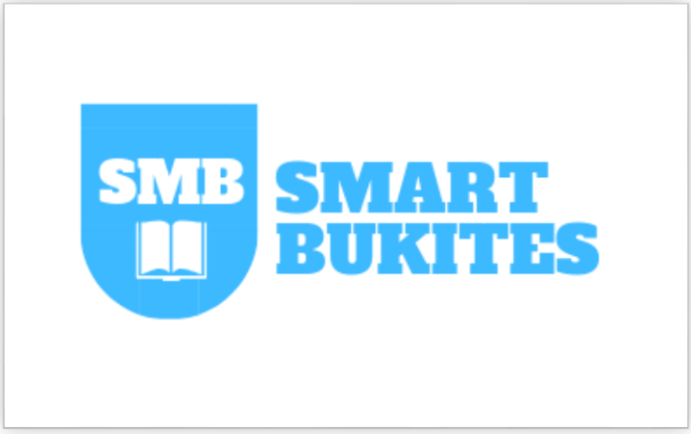

Smart Education is enough to change human academic-struggle positively

VISIT OUR WEBSITE FOR

1. Tutorial videos
2. Solutions to past Question paper
3. Text Book
4. Latest handouts
5. Updates on Scholarships and programs
6. University news and Campus Gossip
7. Guidance and counseling
8. Special Personal Tutorials

URL : www.Smartbukites.com

MTH1301 SET

Email: Info@Smartbukites.com Phone no: +234-705-5978-607

QUESTIONS AND ANSWERS

QUESTION 1

1. Given that x= (whole numbers less than 24),
   - P= (Prime numbers less than 24),
   - Q=(Even numbers less than 24). Find;

A). (P n Q)
B). (P u Q)
C). (P' n Q)
D). (P u Q)'

ANSWER

- ✓ X= (1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23)
- ✓ P= (1,2,3,5,7,11,13,17,19,23)
- ✓ Q= (2,4,6,8,10,12,14,16,18,20,22)

A). (P n Q)= (2)
B). (P u Q) = (1,2,3,4,5,6,7,8,10,11,12,13,14,16,17,18,19,20,22,23)
C). (P' n Q) => P'= Complement of P are those elements not in P are:
(4,6,8,9,10,12,14,15,16,18,20,21,22)

- Therefore, P' n Q = (4,6,7,10,12,14,16,18,20,22)

D). (P u Q)=> Those elements not in P u Q which are (9,15,21)

- Therefore, (P u Q)' = (9,15,21)

QUESTION 2

2. If Q= (All perfect squares less than 30)
   P= (All odd numbers from 1 to 10)

- Find;

i). (P n Q)
ii). (P u Q)
iii).)P u Q) n()

ANSWER

Perfect squares are numbers with square roots, i.e $\sqrt{1}$=1*1, $\sqrt{4}$=2 i.e 2*2=4 OR 2^2=4, 3^2=9, e.t.c

- Q= (1,4,9,16,25)
- P= (1,3,5,7)

i). (P n Q) = (1)
ii). (P u Q) = (1,3,4,5,7,9,16,25)
iii). (P u Q) n ()=> means 0.

- Therefore, (P u Q) n ()= 0

QUESTION 3

3. Gıven that U= (x:x £ N; x<25)

- A= (Even numbers)
- B= (Perfect squares)
- C= (Numbers divisible by 4)

Find;

i). (A' u B') u C

İİ). (A n B)'

iii). (B' n C')

iv). (A u C) n C

v). (B n C)' n A

ANSWER

- U= (x:x £ N; x<25)

The above components set means x is an integer, where x belongs to a set of real numbers N, where x is less than 25, i.e x is less than 25 implies all real numbers less than 25.

Therefore, U= (1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24)

- A= (2,4,6,8,10,12,14,16,18,20,22,249
- B= (1,4,9,16)
- C= (4,8,12,16,20,24)

i). (A' u B') u C =>A'=(1,3,5,7,9,11,13,15,17,19,21,23)

B'= (2,3,5,6,7,8,10,11,12,13,14,15,17,18,19,20,21,22,23,24)

C'= (4,8,12,16,20,24)

- Therefore, (A' u B') u C implies that (A' u B') and then C

(A' u B')= (1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24)

(A' u B') u C = (1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,20,21,22,23,24)

ii). (A n B)'=> (A n B)= (4,16)

- Therefore, (A n B)'= (1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24)

iii). (B' n C') =>B'=(2,3,5,6,7,8,10,11,12,14,15,17,18,19,20,21,22,3,24)

C'=(1,2,3,5,6,7,9,10,11,13,14,15,17,18,19,21,22,23)

- Therefore, ((B' n C')= (2,3,5,6,7,10,11,13,14,15,17,18,19,21,22,23)

iv). (A u C) n C => (A u C)= (2,4,6,8,12,14,16,18,20,22,24)

- Therefore, (A u C) n C = C = (4,8,12,16,20,24)

v). (B n C)' n A =>B n C=(4,16), then

(B n C)'=(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24)

(B n C) n A=(2,6,8,10,12,14,18,20,22,24)

Solution to 2years Pastquestion Paper Will Be Solved and Uploaded On Smartbukites. Latest 11th Week of the Semester

Solution by Imran Jubril Ado