Gurunanak & Chandraketu Pandya English Medium School
Shri Rajanikant Vyas & Chandraketu Pandya English Medium Higher Secondary School
(Pre-Primary, Primary, Secondary & Higher Secondary - Science and Commerce Stream)
Kumbhanath Society, Aavkar Hall Road, Maninagar, Ahmedabad-8. Ph. 25450086 • www.gncschool.com

STD : 6 F.A-4 Assignment Chap : 17,20,21,22,23,24,2
SUB : Aptitude

AGES

Answer the following questions :

1. Mrs Gupta is 2 years younger than four times her daughter Namrata. If Namrata is 8 years old, how old is Mrs Gupta? _____ years

2. Dinesh is 3 years older than three times his daughter Kanika. If Kanika is 12 years old, how old is Dinesh? _____ years

3. Manish is 11 years old. He is 1 year younger than there times his sister Rashmi. What is the age of Rashmi? _____ years

Manshi is 13 years old. Her mother is 2 years younger than her father. Manshi's father 3 years older than three times Manshi's age. Find the ages of Manshi's parents.

Father _____ years Mother _____ years

Kajol, Priya and Sandhya study in the same school. Kajol is 1 year older than two times Priya's age. Also, Sandhya is 2 years younger than Priya. If Kajol is 21 years old, find the ages of Priya and Sandhya.

Priya _____ years Sandhya _____ years

Pinki, Kanika and Pooja are teachers in the same school. Pinki's age is 1 year less than three times Kanika's age. Pooja is 4 years older than Kanika. If Pinki is 59 years old, find the age of Kanika and Pooja.

Kanika _____ years Pooja _____ years

Write the greatest and smallest six digit numbers with different digits.

Greatest ☐☐☐☐☐☐ Smallest ☐☐☐☐☐☐

Write the greatest and smallest six digit numbers, greater than 70000 but with different digits.

Greatest ☐☐☐☐☐☐ Smallest ☐☐☐☐☐☐

Write the greatest and smallest six digit numbers smaller than 432654, but with different digits.

Greatest ☐☐☐☐☐☐ Smallest ☐☐☐☐☐☐

Write the greatest and smallest six digit numbers smaller than 829635, but with all digits same.

Greatest ☐☐☐☐☐☐ Smallest ☐☐☐☐☐☐

Write the greatest and smallest six digit numbers greater than 325175, but with different digits.

Greatest ☐☐☐☐☐☐ Smallest ☐☐☐☐☐☐

Write the greatest and smallest six digit numbers greater than 725614, but with all digits same.

Greatest ☐☐☐☐☐☐ Smallest ☐☐☐☐☐☐

Write the greatest and smallest six digit numbers having four different digits.

Greatest ☐☐☐☐☐☐ Smallest ☐☐☐☐☐☐

20 SMALLEST/GREATEST NUMBERS

1. Write the greatest and smallest six digit numbers using the digits 1, 2, 3, 4, 5 Repetition of digits is not allowed.

Greatest ☐☐☐☐☐☐ Smallest ☐☐☐☐☐☐

2. Write the greatest and smallest six digit numbers using the digits 0, 2, 4, 6, 8 a Repetition of digits is not allowed.

Greatest ☐☐☐☐☐☐ Smallest ☐☐☐☐☐☐

3. Write the greatest and smallest six digit numbers using the digits 2, 3, 4, 5, 6 a Repetition of digits is not allowed.

Greatest ☐☐☐☐☐☐ Smallest ☐☐☐☐☐☐

4. Write the greatest and smallest six digit numbers using the digits 0, 1, 2, 3, 4 an Repetition of digits is not allowed.

Greatest ☐☐☐☐☐☐ Smallest ☐☐☐☐☐☐

5. Write the greatest and smallest six digit numbers using the digits 2, 4, 6, 8 anc Repetition of digits is allowed.

Greatest ☐☐☐☐☐☐ Smallest ☐☐☐☐☐☐

6. Write the greatest and smallest six digit numbers using the digits 0, 1, 5, 8 and Repetition of digits is allowed.

Greatest ☐☐☐☐☐☐ Smallest ☐☐☐☐☐☐

A. Simplify :

1. $5 + 10 \div 2 \times 4 =$
2. $8 \times 3 - 6 \div 3 + 2 =$
3. $7 - (5 + 4 \div 4 \times 2) =$
4. $10 + (10 \div 10 \times 10 - 10) =$
5. $26 \div (8 \times 4 \div 2 + 5 \text{ of } 2) =$
6. $15 - 8 \div (2 + 3 \text{ of } 2) =$

Now, determine the following products mentally.

1. 15 × 15	2. 25 × 25	3. 35 × 35	4. 45 × 45	
5. 55 × 55	6. 65 × 65	7. 85 × 85	8. 95 × 95	
9. 105 × 105	10. 995 × 995	11. 1005 × 1005	12. 999 × 999	
13. 10005 × 10005	14. 99995 × 99995	15. 100005 × 100005		

16. A cap costs ₹ 65. What is the cost of 65 such caps? ₹ ☐

Simplify the following :

1. $2 + 3 \times 6 \div 12 - 4$ =
2. $14 - 7 \times 2 \div 1 + 3$ =
3. $24 - 4 + 2 \div 5 \times 2$ =
4. $2 \times 4 \div 6 \times 36 - 9$ =
5. $7 \times 2 + 8 - 4 \div 3$ =
6. $9 \times 7 \div 3 + 14 - 7$ =
7. $100 - 5 \div 20 \times 5 + 4$ =
8. $35 \div 100 - 20 \times 2 + 5$ =
9. $12 + 2 \div 3 \times 4 - 2$ =
10. $16 - 4 \times 2 + 5 \div 1$ =
11. $8 + 3 \times 7 \div 16 - 4$ =
12. $28 \div 120 - 30 \times 5 + 6$ =

Champa, Mirpur, Gouri and Dolakia are 4 villages in a district. Their statistics are as follows. Read the table and fill the blanks.

	Males	Literate Males	Females	Literate Females	
Champa	520	250	490	235	
Mirpur	940	500	870	600	
Gouri	675	590	715	540	
Dolakia	240	200	245	210	
Total					

Now, answer the following questions :

1. Which village has the largest female population? .....
2. What is the population of all the villages taken together? .....
3. In how many villages is number of literate females more than number males? .....
4. Which village has the smallest population? .....
5. How many males in all four villages taken together are illiterate? .....
6. Which village has the largest number of literates? .....
7. Which village has the smallest male population? .....
8. Which village has the largest male population? .....
9. How many females in all four villages taken together are literate? .....

25 COUNT THE SQUARES

1. Find the number of squares in  (This is a 2 × 2 grid.)

This grid has 4 squares each of side 1 unit 

and 1 square of side 2 units  . So, 5 squares in all.

2. Find the number of squares in  (This is a 3 × 3 grid.)

It has squares of side 1 unit  , 2 units  and 3 units. 

However, counting all becomes difficult.

Trick : (i) 2 × 2 grid

$2 \times 2 = 4$

$1 \times 1 = 1$

Total 5 squares

(ii) 3 × 3 grid

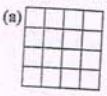
$3 \times 3 = 9$

$2 \times 2 = 4$

$1 \times 1 = 1$

Total 14 squares

3. Find the number of squares in the following grids :

(a) 

$4 \times 4 =$ .....

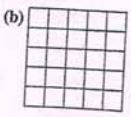
$3 \times \square =$ .....

$\square \times \square =$ .....

$\square \times \square =$ .....

Total = ...

$\square$ squares

(b) 

$5 \times 5 =$ .....

$4 \times \square =$ .....

$\square \times \square =$ .....

$\square \times \square =$ .....

$\square \times \square =$ .....

Total = ...

$\square$ squares

4. Find the number of squares in the following grid. (This grid is a 3 × 2 grid.)

Trick : 3 × 2 grid

$3 \times 2 = 6$

$2 \times 1 = 2$

Total 8 squares

5. Find the number of squares in the following rectangular grids.

(a) 

(4 × 3 grid)

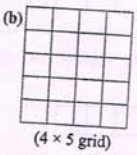
$4 \times 3 =$ .....

$3 \times \square =$ .....

$\square \times \square =$ .....

Total = ...

$\square$ squares

(b) 

(4 × 5 grid)

$4 \times 5 =$ .....

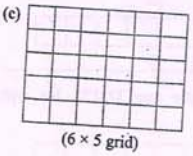
$\square \times \square =$ .....

$\square \times \square =$ .....

$\square \times \square =$ .....

Total = ...

$\square$ squares

(c) 

(6 × 5 grid)

$\square \times \square =$ .....

$\square \times \square =$ .....

$\square \times \square =$ .....

$\square \times \square =$ .....

$\square \times \square =$ .....

Total = ...

$\square$ squares

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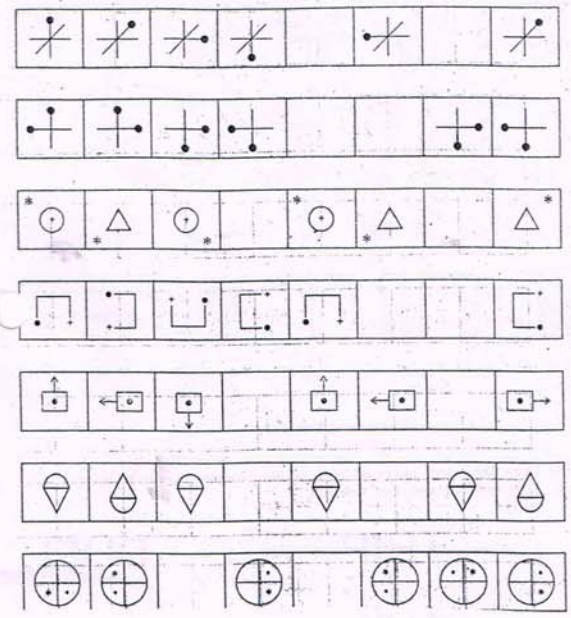
STD: 6 SUB: Aptitude FA: 3 Chap · 13, 14, 15, 16, 17, 18 MARKS:

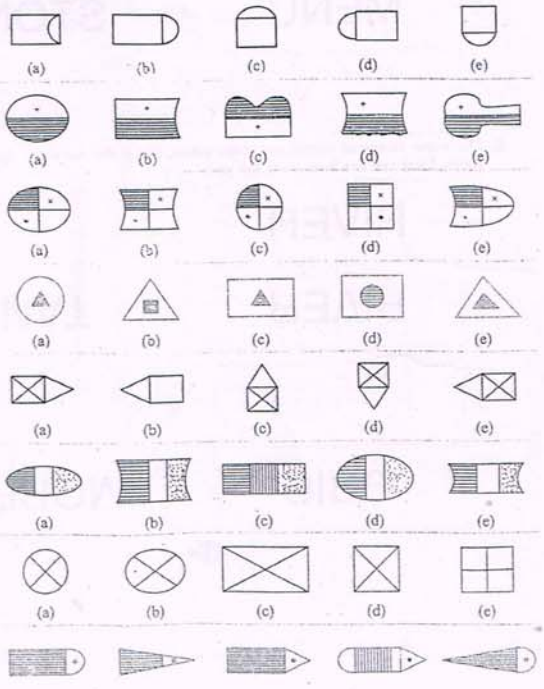
C. Repeating Patterns-3

in the boxes.



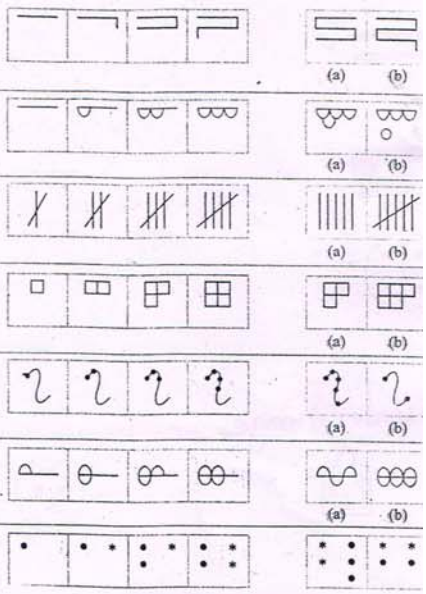
B. Classification (Abstract Figures)

Encircle the odd one

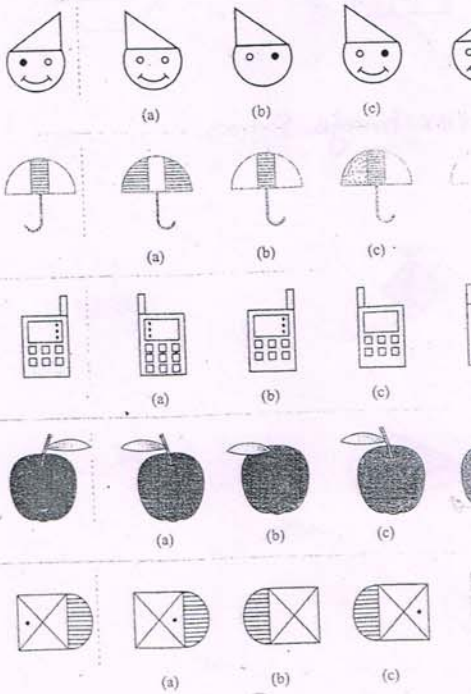


D. Growing Patterns-1

Tick (✓) in the answer figures which comes next.

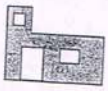


15 MIRROR IMAGES

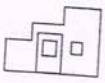


Draw Mirror images:

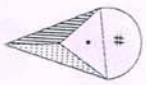
A.



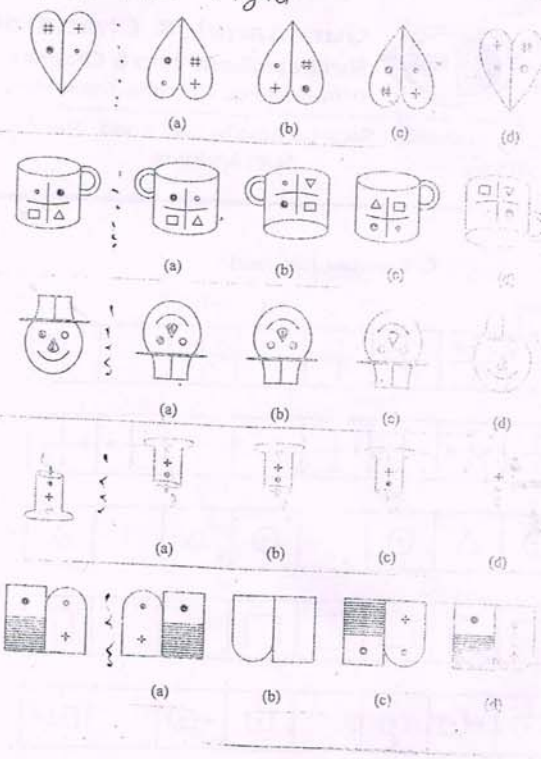
Draw water image



water image Draw



Tick the right



D. Draw the water image of each of the following words in the box g
First one has been done for you.

1. TRIP
TRIP

2. DUEL

3. MENU

4. STON

E. The water image of words are given below. Draw the words in the bo
above. First one has been done for you.

1. RIVER
RIVER

2. TANK

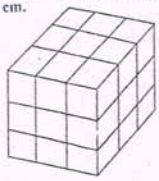
3.

4.

MORRI

CUBES/CUBOIDS

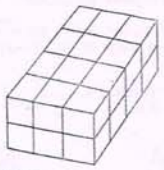
the faces of a cube of side 9 cm were painted with same colour. It was cut o cubical blocks each of side 3 cm.



Now answer the following questions.

1. The number of cubes obtained is
   (a) 8 (b) 16 (c) 27 **(d) 36**
2. The number of cubes with only one face painted is
   (a) 2 (b) 4 (c) 8 (d) 6
3. The number of cubes with two faces painted is
   (a) 2 (b) 12 (c) 10 (d) 12
4. The number of cubes with three faces painted is
   (a) 8 (b) 12 (c) 10 (d) 6
5. The number of cubes with four faces painted is
   (a) 2 (b) 1 (c) 0 (d) 4
6. The number of cubes with five faces painted is
   (a) 6 (b) 2 (c) 1 (d) 0
7. The number of cubes with all faces painted is
   (a) 0 (b) 1 (c) 2 (d) 3
8. The maximum number of painted faces a cube can have is
   (a) 4 (b) 3 (c) 1 (d) 2
9. The number of cubes with no faces painted is
   (a) 2 (b) 1 (c) 3 (d) 4
10. The number of cubes with at least one face painted is
    (a) 27 (b) 28 (c) 26 (d) 23
11. The number of cubes with two or more faces painted is
    (a) 16 (b) 18 (c) 24 (d) 20

B. All the faces of a cuboid of dimensions 8 cm × 6 cm × 4 cm were pai same colour. It was cut into cubical blocks each of side 2 cm.



Now answer the following questions.

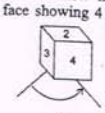
1. The number of cubes obtained is
   (a) 16 (b) 12 (c) 24 (d) 32
2. The number of cubes with only one face painted is
   (a) 16 (b) 12 (c) 8 (d) 4
3. The number of cubes with two faces painted is
   (a) 12 (b) 24 (c) 8 (d) 2
4. The number of cubes with three faces painted is
   (a) 4 (b) 8 (c) 16 (d) 2
5. The number of cubes with four faces painted is
   (a) 1 (b) 0 (c) 3 (d) 2
6. The number of cubes with five faces painted is
   (a) 0 (b) 1 (c) 2 (d) 3
7. The number of cubes with all faces painted is
   (a) 4 (b) 3 (c) 2 (d) 0
8. The maximum number of painted faces a cube can have is
   (a) 1 (b) 2 (c) 3 (d) 4
9. The number of cubes with no faces painted is
   (a) 3 (b) 2 (c) 1 (d) 0
10. The number of cubes with at least one face painted is
    (a) 16 (b) 12 (c) 24 (d) 8
11. The number of cubes with two or more faces painted is
    (a) 20 (b) 16 (c) 18 (d) 8

ROTATING DICE

Horizontal Rotation

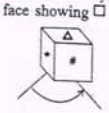
In each of the following questions, the second die is obtained by rotating the first die horizontally to right by an angle of 90°. Observe the dice and answer the questions.

1. The faces of this die show numbers 1, 2, 3, 4, 5 and 6. Number on the face opposite to the face showing 4 is



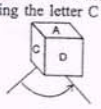

(a) 1 (b) 6 (c) 5 (d) 3

2. The faces of this die show symbols Δ, #, •, X, □, and O. Symbol on the face opposite to the face showing □ is



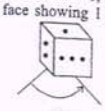

(a) Δ (b) O or X (c) # (d) X

3. The faces of this die show letters A, B, C, D, E and F. Letter on the face opposite to the face showing the letter C is




(a) F (b) E (c) B (d) E or F

4. The faces of this die show 1, 2, 3, 4, 5 and 6 dots. Number of dots on the face opposite to the face showing 1 dot is



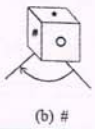

(a) 4 or 6 (b) 4 (c) 6 (d) 2

B. **In each of the following questions, the second die is obtained by rotating die horizontally to left by an angle of 90°. Observe the dice and an questions.**

1. The faces of this die show numbers 1, 2, 3, 4, 5 and 6. Number on opposite to the face showing 2 is


(a) 3 (b) 6 (c) 4 (d) 5

2. The faces of this die show symbols Δ, #, •, X, □, and O. Symbol on opposite to the face showing □ is




(a) Δ (b) # (c) X (d) •

3. The faces of this die show letters A, B, C, D, E and F. Letter on the face to the face showing the letter A is

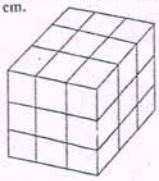

(a) E (b) D (c) F (d) D or

4. The faces of this die show 1, 2, 3, 4, 5 and 6 dots. Number of dots on opposite to the face showing 2 dots is


(a) 5 or 6 (b) 6 (c) 5 (d) 4

CUBES/CUBOIDS

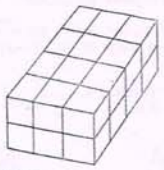
the faces of a cube of side 9 cm were painted with same colour. It was cut o cubical blocks each of side 3 cm.



Now answer the following questions.

1. The number of cubes obtained is
   (a) 8 (b) 16 (c) 27 **(d) 36**
2. The number of cubes with only one face painted is
   (a) 2 (b) 4 (c) 8 (d) 6
3. The number of cubes with two faces painted is
   (a) 2 (b) 12 (c) 10 (d) 12
4. The number of cubes with three faces painted is
   (a) 8 (b) 12 (c) 10 (d) 6
5. The number of cubes with four faces painted is
   (a) 2 (b) 1 (c) 0 (d) 4
6. The number of cubes with five faces painted is
   (a) 6 (b) 2 (c) 1 (d) 0
7. The number of cubes with all faces painted is
   (a) 0 (b) 1 (c) 2 (d) 3
8. The maximum number of painted faces a cube can have is
   (a) 4 (b) 3 (c) 1 (d) 2
9. The number of cubes with no faces painted is
   (a) 2 (b) 1 (c) 3 (d) 4
10. The number of cubes with at least one face painted is
    (a) 27 (b) 28 (c) 26 (d) 23
11. The number of cubes with two or more faces painted is
    (a) 16 (b) 18 (c) 24 (d) 20

B. All the faces of a cuboid of dimensions 8 cm × 6 cm × 4 cm were pai same colour. It was cut into cubical blocks each of side 2 cm.



Now answer the following questions.

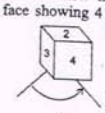
1. The number of cubes obtained is
   (a) 16 (b) 12 (c) 24 (d) 32
2. The number of cubes with only one face painted is
   (a) 16 (b) 12 (c) 8 (d) 4
3. The number of cubes with two faces painted is
   (a) 12 (b) 24 (c) 8 (d) 2
4. The number of cubes with three faces painted is
   (a) 4 (b) 8 (c) 16 (d) 2
5. The number of cubes with four faces painted is
   (a) 1 (b) 0 (c) 3 (d) 2
6. The number of cubes with five faces painted is
   (a) 0 (b) 1 (c) 2 (d) 3
7. The number of cubes with all faces painted is
   (a) 4 (b) 3 (c) 2 (d) 0
8. The maximum number of painted faces a cube can have is
   (a) 1 (b) 2 (c) 3 (d) 4
9. The number of cubes with no faces painted is
   (a) 3 (b) 2 (c) 1 (d) 0
10. The number of cubes with at least one face painted is
    (a) 16 (b) 12 (c) 24 (d) 8
11. The number of cubes with two or more faces painted is
    (a) 20 (b) 16 (c) 18 (d) 8

ROTATING DICE

Horizontal Rotation

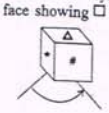
In each of the following questions, the second die is obtained by rotating the first die horizontally to right by an angle of 90°. Observe the dice and answer the questions.

1. The faces of this die show numbers 1, 2, 3, 4, 5 and 6. Number on the face opposite to the face showing 4 is



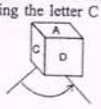

(a) 1 (b) 6 (c) 5 (d) 3

2. The faces of this die show symbols Δ, #, •, X, □, and O. Symbol on the face opposite to the face showing □ is



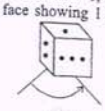

(a) Δ (b) O or X (c) # (d) X

3. The faces of this die show letters A, B, C, D, E and F. Letter on the face opposite to the face showing the letter C is




(a) F (b) E (c) B (d) E or F

4. The faces of this die show 1, 2, 3, 4, 5 and 6 dots. Number of dots on the face opposite to the face showing 1 dot is



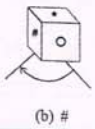

(a) 4 or 6 (b) 4 (c) 6 (d) 2

B. **In each of the following questions, the second die is obtained by rotating die horizontally to left by an angle of 90°. Observe the dice and an questions.**

1. The faces of this die show numbers 1, 2, 3, 4, 5 and 6. Number on opposite to the face showing 2 is


(a) 3 (b) 6 (c) 4 (d) 5

2. The faces of this die show symbols Δ, #, •, X, □, and O. Symbol on opposite to the face showing □ is




(a) Δ (b) # (c) X (d) •

3. The faces of this die show letters A, B, C, D, E and F. Letter on the face to the face showing the letter A is


(a) E (b) D (c) F (d) D or

4. The faces of this die show 1, 2, 3, 4, 5 and 6 dots. Number of dots on opposite to the face showing 2 dots is


(a) 5 or 6 (b) 6 (c) 5 (d) 4

MATHEMATICAL OPERATIONS

Answer the following questions.

1. If 2 * 3 = 6 and 3 * 4 = 12, then 7 * 8 = ...

2. If 35 # 5 = 7 and 48 # 8 = 6, then 100 # 25 = ...

3. If 7Δ 5 = 12 and 3Δ7 = 10, then 99 Δ 101 = ...

4. If 12 ~ 2 = 10 and 20 ~ 5 = 15, then 992 ~ 92 = ...

5. If 20 * 5 = 4 and 12 * 6 = 2, then (100 * 5) * 2 = ...

6. If 100 # 10 = 90 and 17 # 7 = 10, then 35 # (27 # 15) = ...

7. If 27 Δ 33 = 60 and 15 Δ 25 = 40, then (17 Δ 33) Δ (10 Δ 30) = ...

8. If 7 ~ 5 = 35 and 8 ~ 12 = 96, then (7 ~ 2) ~ (8 ~ 2) = ...

9. If 15 ~ 3 = 5 and 40 ~ 8 = 5, then (100 ~ 5) ~ (24 ~ 6) = ...

10. If 50 # 30 = 20 and 7 * 5 = 35, then (8 * 6) # (6 * 3) = ...

11. If 5 * 6 = 30 and 7 * 8 = 56, then (4 * 3) * (3 * 5) = ...

12. If 38 Δ 32 = 70 and 52 ~ 13 = 4, then (49 Δ 51) ~ 25 = ...

13. If 98 # 28 = 70 and 27 ~ 9 = 3, then (78 # 13) ~ 13 = ...