

Work Sheet: CLASS 4 / CS

Introduction:

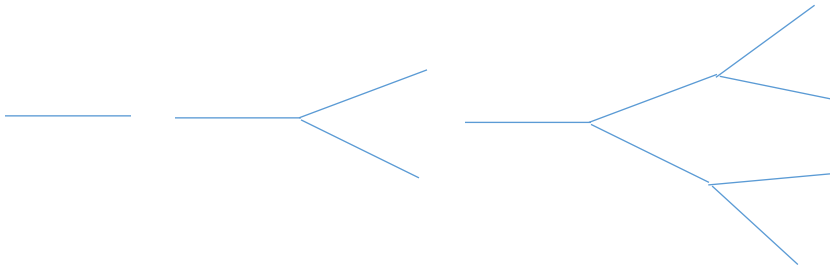
Patterns are everywhere. We learn to observe and recognize them. A pattern is a repeating sequence of things. We can see patterns in numbers, in designs, in animal or human behavior, in nature. Patterns help us to simplify complex ideas, help us to predict behavior and influence our occupations or businesses. E.g., weather patterns influence a farmer's activities, customer buying patterns influence what a shopkeeper stocks, recognizing demand and supply patterns influence prices of goods. Templates can be made from patterns and used in printing, or manufacturing.

Questions: (\* questions can be used for evaluation)

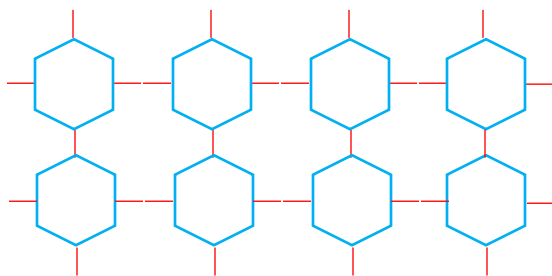
1. Fill in the missing elements in the sequences below

- a) 2, 22, 222, \_\_\_\_\_, 22222
- b) aabb, bbcc, ccdd, \_\_\_\_\_, \_\_\_\_\_
- c) A, b, C, d, E, f, G, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_
- d) 1, 2, 4, 8, 16, \_\_\_\_\_, \_\_\_\_\_
- e) 1, 5, 9, 13, \_\_\_\_\_, \_\_\_\_\_, 25

2. What is the next item in the list?



3. Can you identify the repeating pattern in the design below? Draw it in the box.

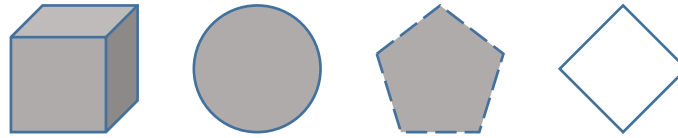




4. Circle the 'odd man out' (the item which is 'different' from the other items) in each list.

- a. radar, madam, banana, level, refer, noon, civic
- b. rain, pain, gain, main, chain, line, drain
- c. apple, papaya, pomegranate, beetroot, banana, sweet lime
  
- d. 1, 2, 3, 5, 17, 9
- e. 6, 9, 15, 21, 24, 28, 30
- f. 4, 16, 25, 81, 66, 49
  
- g. Delhi, Ahmedabad, Bangalore, Mumbai, New York, Chennai
- h. mother, brother, teacher, daughter, grandfather
- i. slipper, sock, sandal, cap, shoe, boot
- j. lake, river, forest, sea, ocean, stream
- k. Earth, Mercury, Jupiter, Saturn, Moon, Venus
  
- l. 33, 77, 121, 22, 99, 45
  
- m. cake, lollipop, kheer, samosa, rasgulla, ladoo

5. Each of the items in the list below could be 'odd man out'! Can you write in the table why?



Shape	Why is it the odd man out?

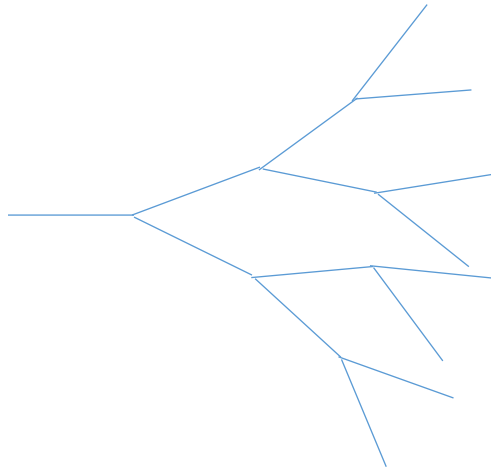
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ANSWERSHEET: (For Teacher only)

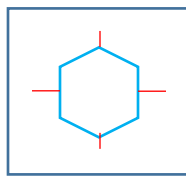
1. Fill in the missing elements in the sequences below.

- a. 2222
- b. ddee, eeff
- c. h, I, j
- d. 32, 64
- e. 17, 21

2.



3. Repeating pattern - note that the length of the red vertical lines will be half what they appear in the full design!



4. Odd man out

- a. Banana - all the rest are palindromes - i.e., they spell the same forwards and backwards
- b. Line because it does not end with '-ain'
- c. Beetroot - all the rest are fruits and grow above the ground
- d. 2 - all the other numbers are odd
- e. 28 - all other numbers appear in 3's table
- f. 66 - all the others are 'squares'



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- g. New York – all other cities are in India ... some children may answer Ahmedabad because all the others are capital cities – that will be fun! You can introduce the concept of there being more than one possible answer to ‘odd man out’
- h. Teacher – all the others are family members
- i. Cap – all the other items are footwear
- j. Forest – all others are water bodies
- k. Moon – all others are planets
- l. 45 – all others appear in 11’s table
- m. Samosa – all the others are sweets

5. Odd man out

Shape	Why is it the odd man out?
Circle	It is the only shape which is not angular
Pentagon	It is the only one with a dotted border
Diamond	It is the only one which is not shaded
Box	It is the only one which is 3-D