

Worksheet

Patterns and Symmetry

Question 1: Make a pattern with the blocks given below:

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Answer :

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Question 2: Make a tessellation pattern using the following blocks:

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Answer :

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Question 3: Continue the patterns:

• 616AA, 52788, 438CC, 549DD, 6510EE, 7811FF.

• 425A, 4158, 405C, 395D, 385E, 375F.

• 12A, 138, 14C, 15D, 16E, 17F.

• 51, 56, 61, 66, 71, 76, 81.

• 13, 23, 33, 43, 53, 63, 73, 83.

• KL9, LM8, MN7, NO6, OP5, PQ4.

• Y, W, U, S, Q, O, M.

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Question 4: Make a pattern using following blocks:

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Question 5: Draw the next figures that follow the patterns:

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Question 6: Identify the rule and write the next three terms of each pattern:

- X, Y, X, Y, X, Y, X, Y, X.
- 110, 220, 330, 440, 550, 660, 770, 880.

Question 7: Write the next three terms of each pattern:

- 9, 10, 12, 15, 19, 24, 30.
- 491, 482, 473, 464, 455, 446, 437.

Question 8: The next term of the pattern GGV, FFU, EET, ... is HHS.

Question 9: The next term of the pattern 1, 2, 3, 5, 8, ... is 12.

Question 10: Write the next three terms of each pattern:

- 9A1, 882, 7C3, 6D4, 5E5, 4F6.
- 8, E, H, K, N, Q, T.

Question 11: Study the pattern carefully and complete it.

$$\begin{aligned}
 1 \times 1 \times 1 &= 1 \\
 2 \times 2 \times 2 &= 8 = 3 + 5 \\
 3 \times 3 \times 3 &= 27 = 7 + 9 + 11 \\
 4 \times 4 \times 4 &= 64 = 13 + 15 + 17 + 19 \\
 5 \times 5 \times 5 &= 125 = 21 + 23 + \underline{25} + \underline{27} + \underline{29}. \\
 6 \times 6 \times 6 &= 216 = \underline{31} + \underline{33} + \underline{35} + \underline{37} + \underline{39} + \underline{41}. \\
 7 \times 7 \times 7 &= 343 = \underline{43} + \underline{45} + \underline{47} + \underline{49} + \underline{51} + \underline{53} + \underline{55}. \\
 8 \times 8 \times 8 &= \underline{512} = \underline{57} + \underline{59} + \underline{61} + \underline{63} + \underline{65} + \underline{67} + \underline{69} + \underline{71}.
 \end{aligned}$$

Question 12: The next term of the pattern LCD, MEF, NGH, ... is OIJ.

Question 13: The next term of the pattern 7104, 8114, 9124, 10134, ... is **11144**.

Question 14: The next term of the pattern AA9B, BB8C, CC7D, DD6E, ... is **EE5F**.

Question 15: The next term of the pattern A41, Z43, B45, Y47, ... is **C49**.