# Pattern Power

Circle the letter of the best answer.

Name _____ Date _____

1. In a repeating pattern, what do we call the smallest group of items that keeps repeating over and over?

   A) The total number of items in the list
   B) The very last item in the list
   C) Any single item picked at random
   D) The repeating unit

   Working

2. A pattern goes star, moon, sun, star, moon, sun, star, moon, sun. What is the length of its repeating unit?

   A) 3 B) 4 C) 6 D) 2

   Working

3. During the warm-up, the coach calls out these actions in order: spin, stomp, spin, stomp, spin, stomp. What comes next in this pattern?

   A) stomp B) spin C) clap D) jump

   Working

4. The toy animals lined up on the shelf are placed in this order: hen, goat, duck, hen, goat, duck, hen. What comes next in this pattern?

   A) hen B) rabbit C) goat D) duck

   Working

5. Stickers, in order: sun sticker, moon sticker, sun sticker, moon sticker, sun sticker, sun sticker, sun sticker, moon sticker, sun sticker, moon sticker. Where does the pattern first break?

   A) 6th B) 4th C) 8th D) 9th

   Working



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6. Stickers, in order: cloud sticker, moon sticker, cloud sticker, star sticker. This block of 4 repeats. If it continues, what is the 21st sticker?

A) flower sticker B) cloud sticker C) star sticker D) moon sticker

Working

7. Poster shapes, in order: rectangle, rectangle, heart, heart, square. This block of 5 repeats. If it continues, what is the 18th shape?

A) oval B) rectangle C) heart D) square

Working

8. In a repeating pattern of animals, each repeating unit contains exactly one 'cow'. The cow appears at position 2, position 7 and position 12. How many animals make up one unit?

A) 10 B) 4 C) 6 D) 5

Working

9. A repeating pattern of letters uses exactly these 3 different letters, each appearing once in the block: D, I, J. In the block, position 2 is 'D'; position 3 is 'J'. Which letter must be in position 1?

A) J B) D C) I D) H

Working

10. Stickers, in order: moon sticker, cloud sticker, sun sticker, heart sticker, moon sticker, cloud sticker, sun sticker, ___, moon sticker, cloud sticker, sun sticker, heart sticker. One sticker is missing, shown as '___'. Which sticker belongs there?

A) heart sticker B) cloud sticker C) moon sticker D) sun sticker

Working

Answer key — fold under before giving this to a child

1. D 2. A 3. B 4. C 5. A 6. B 7. C 8. D 9. C 10. A

## Answers explained — for the teacher



1. D) The repeating unit
   The repeating unit is the small group of items that repeats again and again to build the whole pattern.
2. A) 3
   The unit 'star, moon, sun' has three items, and this group of three keeps repeating.
3. B) spin
   The pattern repeats the block 'spin, stomp'. Right after 'stomp', the block continues with 'spin', so that is what comes next.
4. C) goat
   The pattern repeats the block 'hen, goat, duck'. Right after 'hen', the block continues with 'goat', so that is what comes next.
5. A) 6th
   Following the block 'sun sticker, moon sticker', the 6th spot should hold 'moon sticker', but the row shows 'sun sticker' there instead, so the pattern breaks at the 6th position.
6. B) cloud sticker
   The block is 4 stickers long. $21 = 5 \times 4 + 1$, so after five whole blocks the 21st sticker is the 1st sticker of the block: cloud sticker.
7. C) heart
   The block is 5 shapes long. $18 = 3 \times 5 + 3$, so after three whole blocks the 18th shape is the 3rd shape of the block: heart.
8. D) 5
   Each unit holds exactly one cow, and the cow comes back every 5 positions (2, then 7, then 12), so each unit is 5 animals long.
9. C) I
   The block uses the letters D, I, J, each exactly once. Since position 2 is already 'D'; position 3 is already 'J', the only letter left for position 1 is 'I'.
10. A) heart sticker
    The block is 'moon, cloud, sun, heart', 4 stickers long. The gap is the 8th sticker, and $8 = 2 \times 4$, so it is the last sticker of the second block: heart sticker.