INTERNATIONAL INDIAN SCHOOL

BURAIDAH

Worksheet For The Academic Year 2026-27

CLASS: VIII SUBJECT: Mathematics DATE: 06/07/2026

LESSON-6 We distribute , yet we multiply

1) An expression with a bracket uses distributive property for expansion.

2) Simplify: a) $3x(4x - 5y)$ b) $(2x - 3y)^2$ c) $(7 - x)(7 + x)$ d) $(b - 7)^2$

e) $(3x + 5)(5x - 2)$ f) $(4y + 3)^2$ g) $(xy + 3z)^2$ h) $\left(\frac{2}{3}m + \frac{3}{2}n\right)^2$

i) $\frac{3}{7}(2x^2 + 4x - 7)$ j) $(3x + 2)(2x - 5y + 4)$ k) $2xy \times \frac{9}{16}x^2y \times \left(-\frac{4}{3}xy\right)$

3) Find the value using suitable identity:

a) 95×105 b) 103^2 c) 95^2 d) 52×48 d) $28^2 - 26^2$

4) Use easy multiplication and simplify:

a) 378×101 b) 732×1001 c) 8932×11 d) 24×10001

e) 635×99 f) 4125×999

5) Multiply in a single line:

a) 562×11 b) 3333×11 c) 4567893×11

6) Represent $(30 + 5)^2$ geometrically.

7) Check if $(a + b)^2$ is greater than or less than $a^2 + b^2$ with proper justification if: a) a and b are both positive b) a and b are both negative

c) one is positive and the other negative.

8) Write proper expression for:

a) 10 more than the square of a number b) sum of the squares of 3 consecutive numbers c) the square of the sum of two numbers.

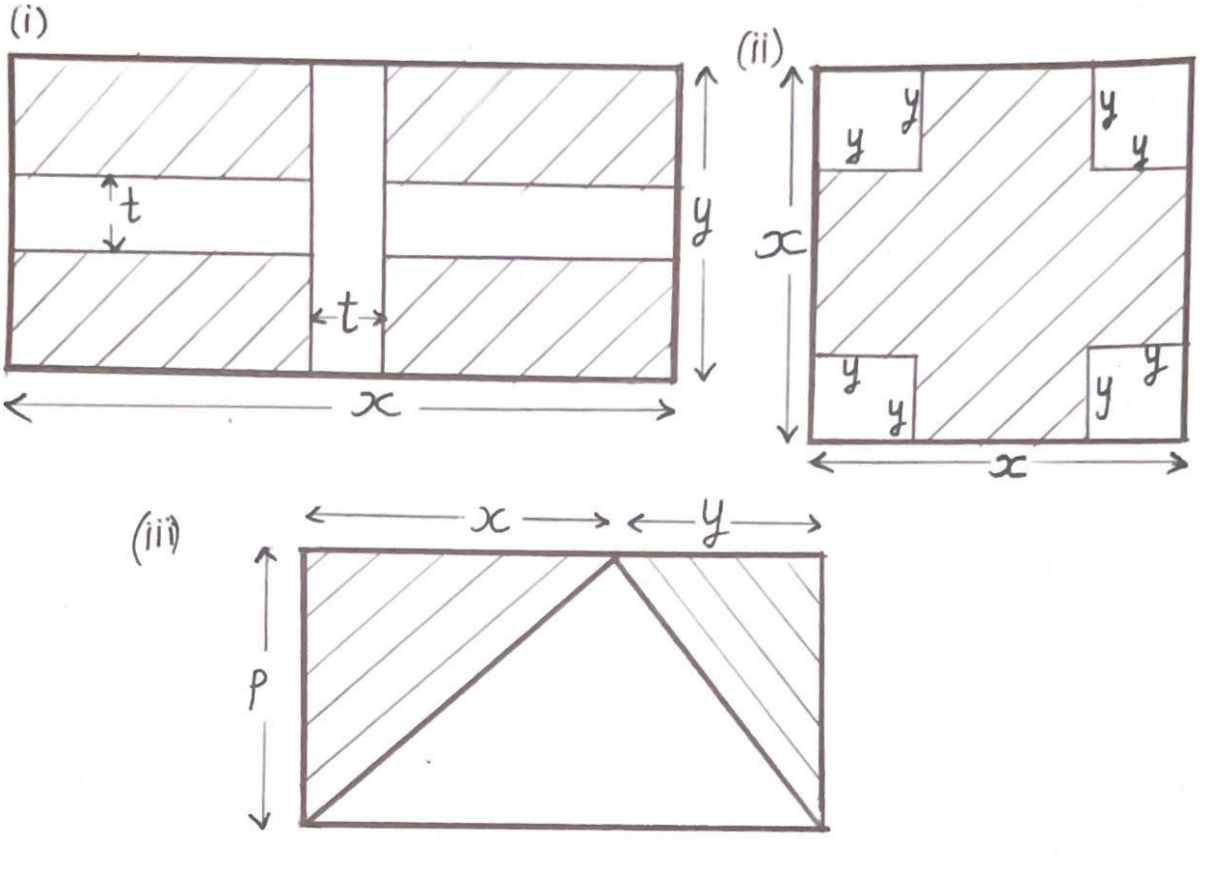
9) A number leaves a remainder of 2 when divided by 5 and another number leaves a remainder of 3 when divided by 5. What will be the remainders when the sum , difference and product of these numbers are divided by 5?

10) Without fully computing find which is greater?

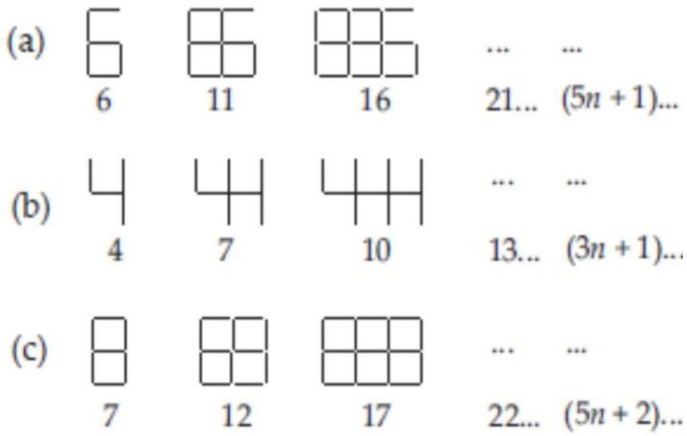
a) 28×72 or 25×75 b) 17×25 or 16×26

11) If the general form of a figure pattern of circles is represented as $k^2 + 4k$, find the number of circles in the a) first step b) 15^{th} step c) 100^{th} step.

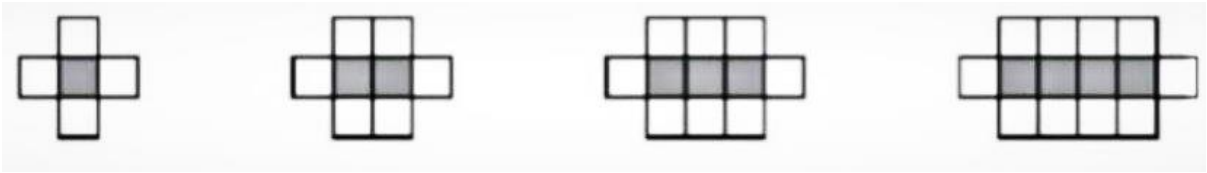
12) Find the area of the shaded portion in each of the following:

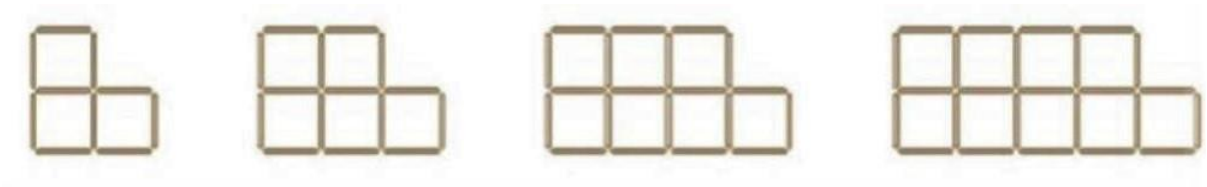


13) The number of matchsticks used in the following pattern is given. Find the number of sticks that will be used in the 10^{th} step.



14) Write the expression to find the number of tiles in step “k” in the following:





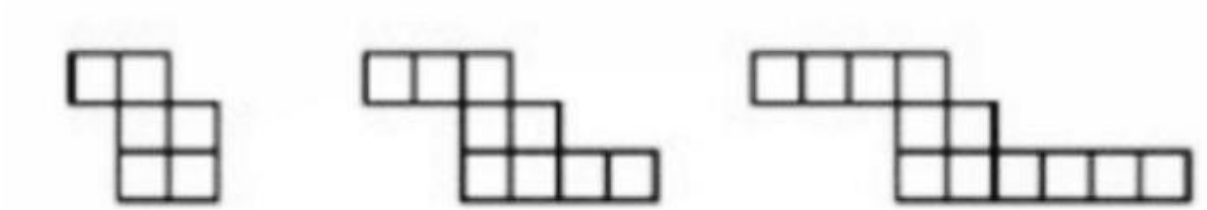


Figure 1 Figure 2 Figure 3

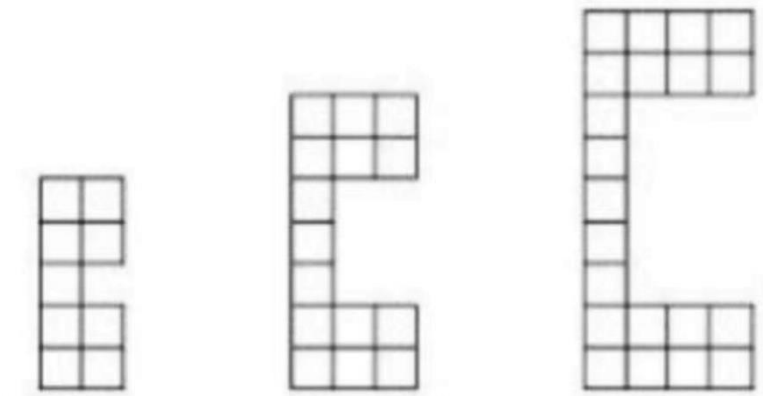
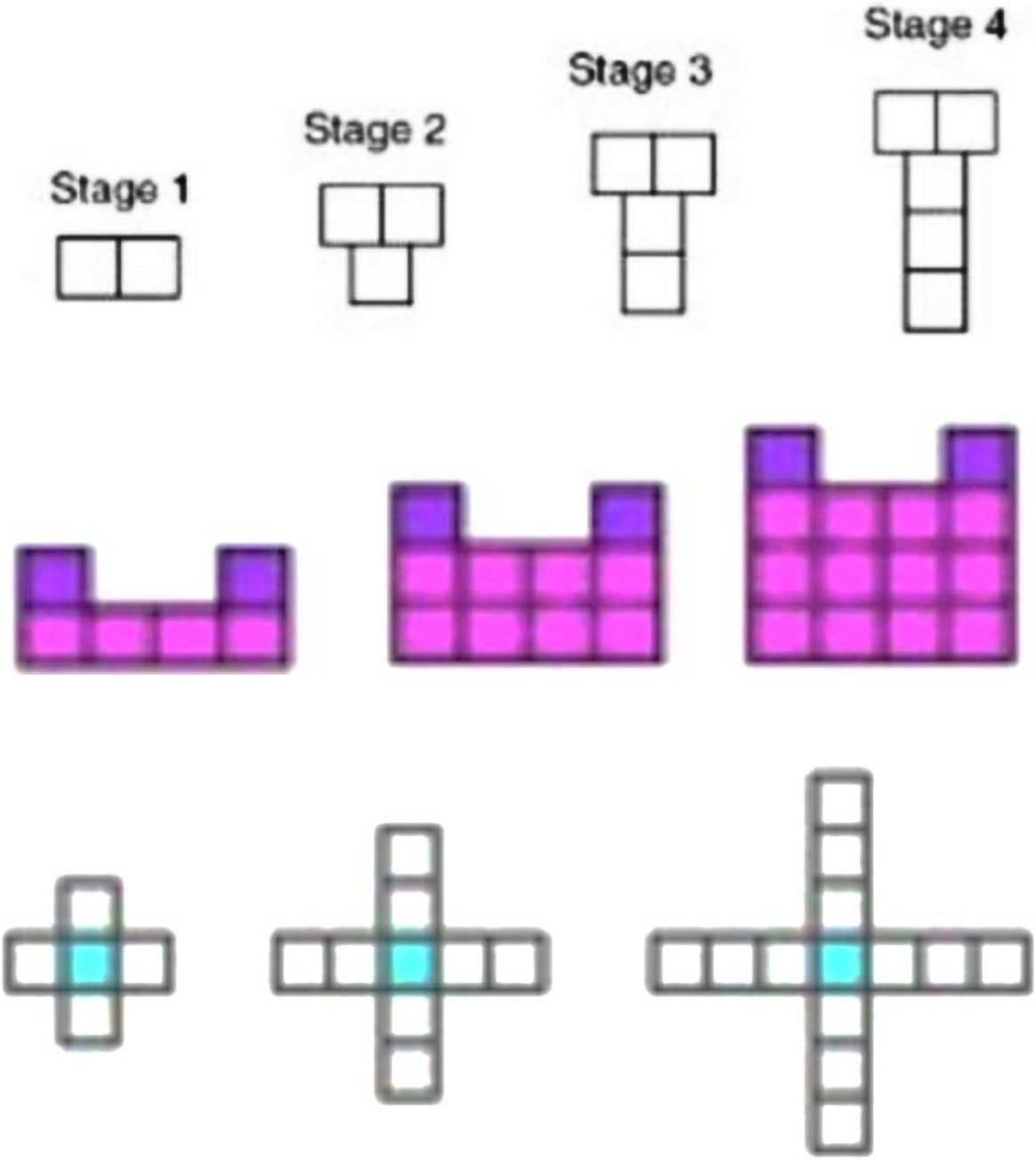


Figure 1 Figure 2 Figure 3



Answers

7) a) greater b) greater c) lesser

8) a) $x^2 + 10$ b) $a^2 + (a + 1)^2 + (a + 2)^2$ c) $a^2 + b^2$ 9) 0 , 4 , 1

11) a) 5 b) 285 c) 10400 12) $xy - yt - xt + t^2$, $x^2 - 4y^2$, $\frac{1}{2}p(x + y)$

13) a) 51 b) 31 c) 52

14) $3k + 2$, $2k + 1$, $2k + 1$, $3k + 3$, $6k + 3$, $k + 1$, $4k + 2$, $4k + 1$