

# Solutions

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1. Write the next three terms in each sequence.

a)  $3, 9, 27, 81, \dots$   $243, 729, 2187$

b)  $\frac{1}{2}, \frac{1}{4}, \frac{1}{6}, \frac{1}{8}, \dots$   $\frac{1}{10}, \frac{1}{12}, \frac{1}{14}$

c)  $80, 70, 60, 50, \dots$   $40, 30, 20$

d)  $4, 7, 10, 13, \dots$   $16, 19, 22$

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2. Describe each pattern in words. Then, show the next three terms.

a) 10, 14, 18, 22, ... *26, 30, 34 Add 4*



c) 729, 243, 81, 27, ... *9, 3, 1*  
 d)  $\frac{2}{3}, \frac{5}{3}, \frac{8}{3}, \frac{11}{3}, \dots$   *$\frac{14}{3}, \frac{17}{3}, \frac{20}{3}$*

*Divide by 3*

*Regular polygons whose # of sides reduces by one.*

*Add on one ( $\frac{3}{3}$ ), add 3 to the numerator*

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3. Describe each pattern. Then, show the missing terms.

a) *5*, *9*, 15, 19, 23 *Add on 4*



c) *32*, 16, 8, *4*, 2 *Divide by 2*

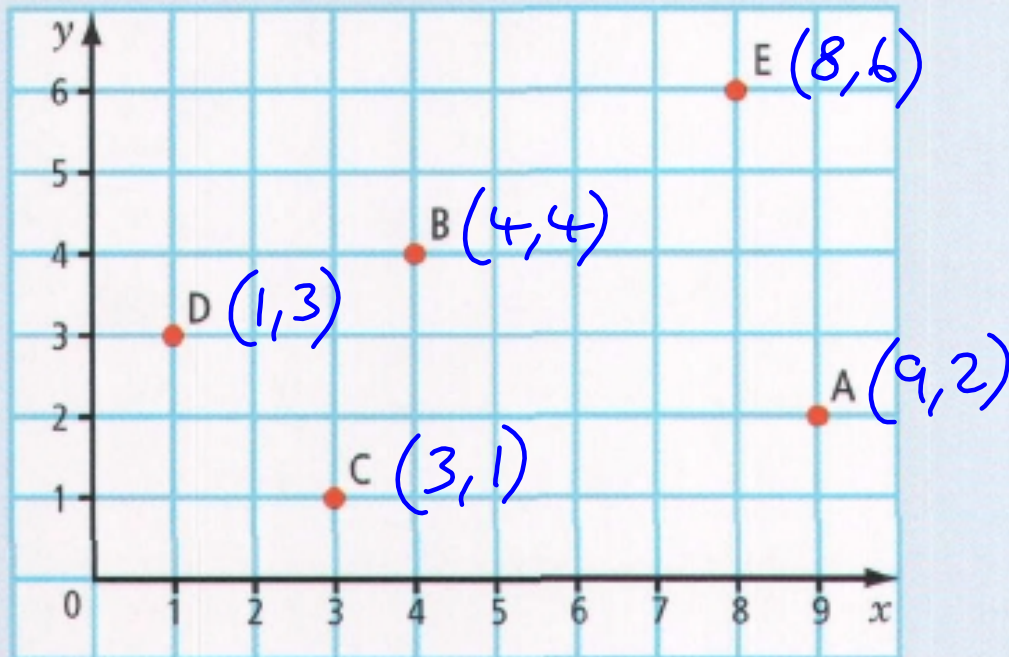
d)

Days After Planting Grass Seed	Height of New Grass (mm)
1	5
2	10
3	<i>15</i>
4	<i>20</i>
5	25

*Add on 5*

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4. Write an ordered pair for each point on the grid.

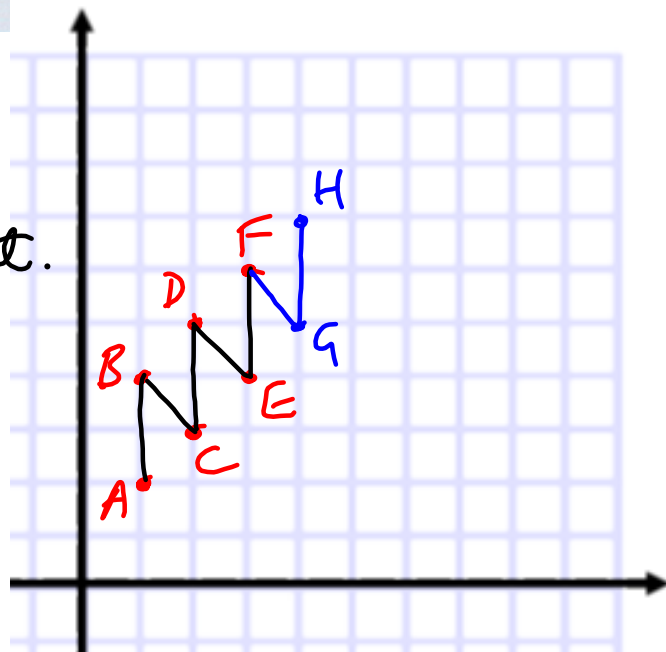


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5. a) Plot the ordered pairs A(1, 2), B(1, 4), C(2, 3), D(2, 5), E(3, 4), and F(3, 6).  
 b) Join A to B, B to C, and so on. Describe the pattern.  
 c) Predict the next two ordered pairs in the pattern.

b) Up 2, then down 1 and right 1. Repeat.

c) G(4, 5)  
 H(4, 7)

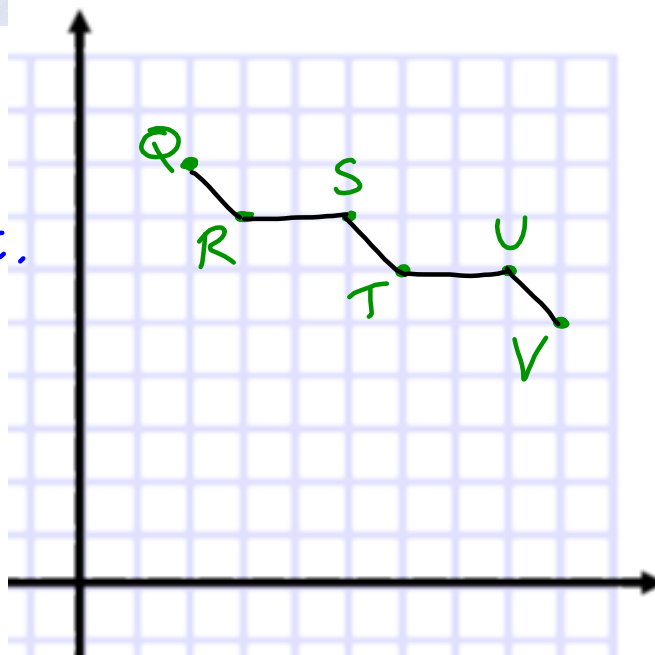


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6. a) Plot the ordered pairs Q(2, 8), R(3, 7), S(5, 7), T(6, 6), U(8, 6), and V(9, 5).  
b) Join Q to R, R to S, and so on. Describe the pattern.  
c) Predict the next two ordered pairs in the pattern.

b) Down 1, right 1, then right 2. Repeat.

c) W(11, 5)  
X(12, 4)



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