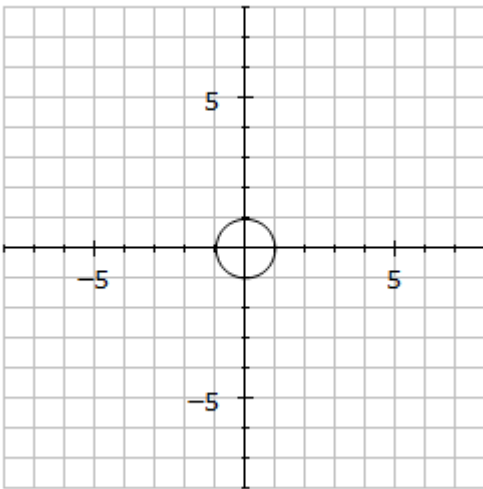


Extension Patterns and Graphs Practice #1

1. a) Write the equation, in terms of n , for the pattern: 2, 7, 12, 17, ...:
 b) Write the equation, in terms of n , for the pattern: 80, 70, 60, 50, ...:

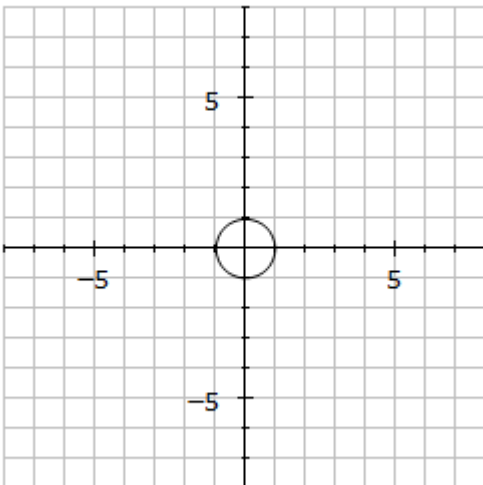
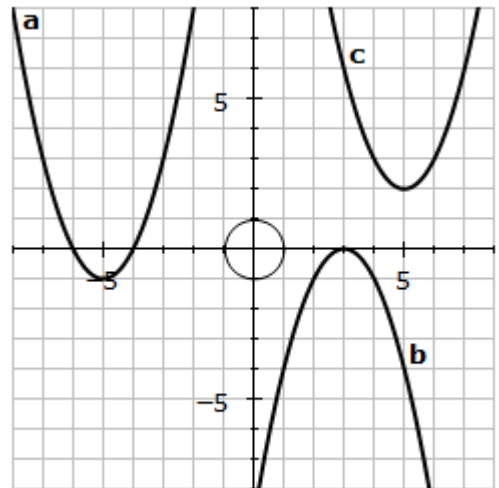
2. a) Write the first 5 terms for the formula $t_n = \frac{1}{2}n + 3$:
 b) Write the first 5 terms for the formula $t_n = 2^n$:



3. On the grid:
 a) Draw the graph of $y = (x + 4)(x + 2)$
 b) Draw the graph of $y = 4x - x^2 - 3$

4. Write the equations for the graphs shown:

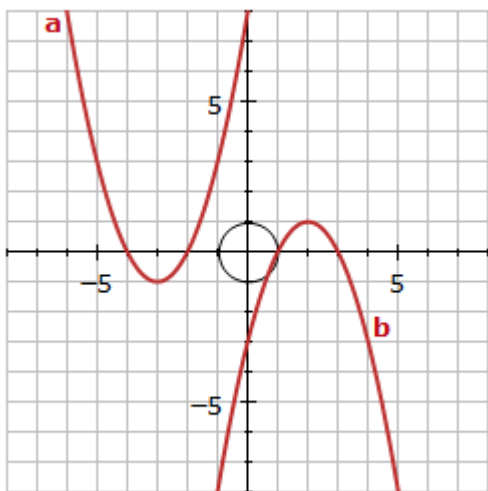
- a)
- b)
- c)



5. On the grid:
 a) Draw the graph of $2x + y = 8$
 b) Draw the graph of $3x - 4y = 12$

Answers: Extension Patterns and Graphs Practice #1

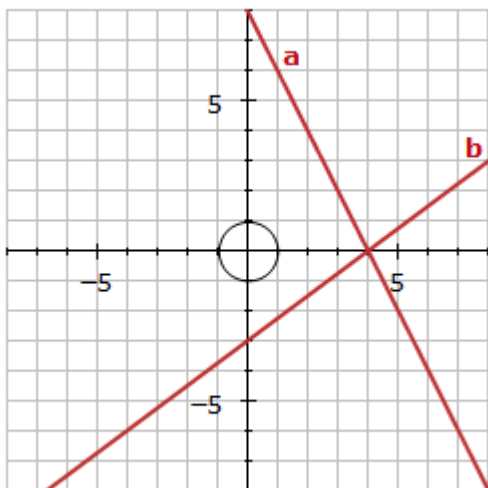
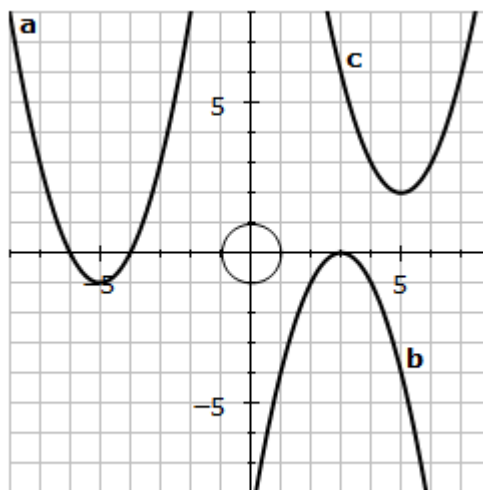
1. a) Write the equation, in terms of n , for the pattern: 2, 7, 12, 17, ...: $t_n = 5n - 3$
- b) Write the equation, in terms of n , for the pattern: 80, 70, 60, 50, ...: $t_n = -10n + 90$
2. a) Write the first 5 terms for the formula $t_n = \frac{1}{2}n + 3$: **3.5, 4, 4.5, 5, 5.5**
- b) Write the first 5 terms for the formula $t_n = 2^n$: **2, 4, 8, 16, 32**



3. On the grid:
- a) Draw the graph of $y = (x + 4)(x + 2)$
- b) Draw the graph of $y = 4x - x^2 - 3$

4. Write the equations for the graphs shown:

- a) $y = (x + 6)(x + 4)$ or $y = (x + 5)^2 - 1$
- b) $y = -(x - 3)^2$ or $y = -(x - 3)(x - 3)$
- c) $y = (x - 5)^2 + 2$



5. On the grid:
- a) Draw the graph of $2x + y = 8$
- b) Draw the graph of $3x - 4y = 12$