

Linear Sequences

1. Which of these sequences are linear sequences:

- a. 5, 10, 15, 20, 25, 30... b. 7, 10, 14, 19, 25, 32...
c. 7, 10, 13, 16, 19, 22, 25... d. -27, -22, -17, -11, -5...
e. 1, 2, 3, 5, 8, 11, 19... f. 3, -1, -5, -9, -13, -17...

2. The engine of a train has 8 wheels and each of the trucks that it is pulling has 4 wheels.

- a. What is the total number of wheels will there be on an engine pulling 12 trucks?
b. Write an expression for the number of wheels (w) on an engine pulling (n) trucks

3. Find the next two terms and an expressions for the n^{th} term for each of the following linear sequences:

- a. 3, 5, 7, 9, 11... b. 4, 7, 10, 13, 16, 19...
c. 7, 12, 17, 22, 27... d. 2, 5, 8, 11, 14, 17...
e. 1, 5, 9, 13, 17, 21... f. 7, 11, 15, 19, 23, 27...
g. 7, 5, 3, 1, -1, -3... h. 10, 4, -2, -8, -14, -18...

4. Find the next two terms and an expressions for the n^{th} term for each of the following linear sequences:

- a. 3.5, 4, 4.5, 5, 5.5... b. -4, -7, -10, -13, -16, -19...
c. 7, -1, -9, -17, -25... d. 2.5, -1, -4.5, -8, -11.5, -15...