## Assessment Task <br> TI-15 Explorer ${ }^{\text {Tm }}$ : Finding Patterns

## Name:

1. Find the missing numbers:
a) 5,8 , $\qquad$ , 14, $\qquad$
$\qquad$
b) $\qquad$ 12 $\qquad$ , 22, 27, $\qquad$
$\qquad$ , -
c) $\qquad$ ,24, 35, $\qquad$ , $\qquad$ ,68, $\qquad$
2. Adam uses this rule to work out a linear number pattern.

Multiply the ordinal or position number (eg. position meaning the 1st, 2nd, 3rd .... number in the sequence) by 5 and then add 3

The first three numbers of his pattern are $8,13,18$.
a) What are the 4 th and 5 th numbers $\qquad$
b) What is the 10th number $\qquad$
c) What is the 57 th number
3. If the following numbers were divided by a common divisor and the remainder was 3 what was the divisor?
a) $11,13,15$
Divisor $\qquad$
b) $31,38,52$
Divisor $\qquad$
c) $63,38,98$
Divisor $\qquad$

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4. The following sets of numbers form part of a linear relationship (straight line pattern). Describe the relationship (ie what is the rule). The numbers are not in position or in order.
a) 67. 40. 85 Rule:
i) Is there more than one rule that will work? Describe another:
$\qquad$
b) 20. 44. 26 Rule:
i) Is there more than one rule that will work? Describe another
$\qquad$
5. Tessa is making garden beds surrounded by pavers.


Bed 1


Bed 2


Bed 3


Bed 4


Bed 5

How many pavers would Tessa need to make Bed 4, Bed 6, Bed 10, Bed 25 and bed 250?

To help you solve this:
Complete the table on the right as far as possible and work out a rule. Describe your rule below. Use your rule to complete the rest of the table.

| Garden bed number | Number of pavers |  |
| :---: | :---: | :---: |
| 1 | 8 |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
|  |  |  |
| 10 |  |  |
| 25 |  |  |
| 250 |  |  |

