

Criterion B: Investigating patterns

Maximum: 8

At the end of year 5, students should be able to:

- i. select and apply mathematical problem-solving techniques to discover complex patterns
- ii. describe patterns as general rules consistent with findings
- iii. prove, or verify and justify, general rules.

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors below.
1–2	The student is able to: i. apply, with teacher support, mathematical problem-solving techniques to discover simple patterns ii. state predictions consistent with patterns.
3–4	The student is able to: i. apply mathematical problem-solving techniques to discover simple patterns ii. suggest general rules consistent with findings.
5–6	The student is able to: i. select and apply mathematical problem-solving techniques to discover complex patterns ii. describe patterns as general rules consistent with findings iii. verify the validity of these general rules.
7–8	The student is able to: i. select and apply mathematical problem-solving techniques to discover complex patterns ii. describe patterns as general rules consistent with correct findings iii. prove, or verify and justify, these general rules.

Note: A task that does not allow students to select a problem-solving technique is too guided and should result in students earning a maximum achievement level of 4 in year 5. However, teachers should give enough direction to ensure that all students can begin the investigation.

For year 5, a student who describes a general rule consistent with incorrect findings will be able to achieve a maximum achievement level of 6, provided that the rule is of an equivalent level of complexity.