Criterion B: Investigating patterns

Maximum: 8

At the end of year 3, students should be able to:

i. **select** and **apply** mathematical problem-solving techniques to discover complex patterns

ii. **describe** patterns as relationships and/or general rules consistent with findings

iii. **verify** and **justify** relationships and/or 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** relationships and/or 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 relationships and/or general rules consistent with findings iii. **verify** these relationships and/or 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 relationships and/or general rules consistent with correct findings iii. **verify** and **justify** these relationships and/or 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 (year 3 and higher). However, teachers should give enough direction to ensure that all students can begin the investigation.

For year 3 and higher, 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.