

Advancing Student Thinking— Part 2

- 1 STUDENT: OK, we noticed that the amount missing goes up by 3. I don't know
2 how that ties in, but--
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- 4 TEACHER: Would that work for figure 10?
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- 6 STUDENT: I don't know. I guess I was just like looking at stage one through
7 five.
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- 9 TEACHER: So-- and for stage two?
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- 11 STUDENT: It's one. And then it's three, and then it's six, and then it's 10.
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- 13 TEACHER: So I do notice, though, that you were putting it into a shape that
14 you're more comfortable with. What did you place it into?
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- 16 STUDENT: A square.
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- 18 STUDENT: A square.
19
- 20 TEACHER: And why a square?
21
- 22 STUDENT: I don't know. I think it's just easier to, like, picture.
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- 24 TEACHER: Easier to picture with that there?
25
- 26 STUDENT: And try to come up with a pattern because, like, our main goal right
27 now is to try to find an equation.
28
- 29 TEACHER: OK, that makes sense to me. What figure is this?
30
- 31 STUDENT: Five.
32
- 33 STUDENT: Five.
34
- 35 TEACHER: And how does this one relate to that figure figure?
36
- 37 STUDENT: What I said is that the other half is from the previous stage. So I just
38 thought it has [INAUDIBLE] with that. So maybe it's like x square
39 minus the previous x or something like that. Because if we're filling
40 in the whole square. So this is 5 by 5. So it'll be like-- I don't know
41 how to do it right now. Or 25-- I don't know. So anyways--
42
- 43 STUDENT: It's 25, yeah.
44

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- 45 STUDENT: Yeah, so 25. So if we're using the next-- the previous stage, we're
46 just taking away how many the whole stage has. And then we get
47 our number.
48
- 49 STUDENT: For this stage, for like what we're trying to do, we'd have to figure
50 out what's missing and then go from there. So that's what we're
51 trying to figure out.
52
- 53 TEACHER: So I do notice here that you have your original shape here. in blue,
54
- 55 STUDENT: Yeah, in blue. And then yellow is like--
56
- 57 STUDENT: Like the space missing.
58
- 59 STUDENT: Yeah.
60
- 61 TEACHER: OK. Are they similar?
62
- 63 STUDENT: Yeah.
64
- 65 STUDENT: But it's just one less.
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- 67 TEACHER: One less?
68
- 69 STUDENT: Yeah, so it's pretty much the stage previous, like she said.
70
- 71 TEACHER: The stage previous? What if you used the same stage?
72
- 73 STUDENT: What do you mean?
74
- 75 STUDENT: Like adding another-- she just confused me right there.
76
- 77 TEACHER: What if you used the same stage? What if you did use the same
78 stage? You're saying you did the previous. What if you used the
79 same stage?
80
- 81 STUDENT: The next stage would be-- wait, what? I'm confused what she's
82 asking.
83
- 84 STUDENT: We got some work to do.
85
- 86 STUDENT: We got some-- I don't know.
87
- 88 TEACHER: So--
89

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90 STUDENT: So this is stage-- well, now you just made it like so it's like stage six.
91 Well, if it was like this.
92
93 TEACHER: So this right here, the blue is stage--
94
95 STUDENT: Five. And then--
96
97 STUDENT: This is stage five.
98
99 TEACHER: And that's stage five.
100
101 STUDENT: Yeah.
102
103 STUDENT: That--
104
105 STUDENT: The same thing.
106
107 STUDENT: Yes.
108
109 TEACHER: It's the same thing?
110
111 STUDENT: Yes. I mean, the other half.
112
113 STUDENT: Ah! 6 times 5 is 30. And it says 15 divided by 2.
114
115 STUDENT: Oh!
116
117 STUDENT: Yeah.
118
119 STUDENT: OK, that's good.
120
121 STUDENT: That's our equation, boys!