Prealgebra

Chapters 8–11 | Show your work. Explain how you know.

Name: _____ Date: _____

01 CH. 8

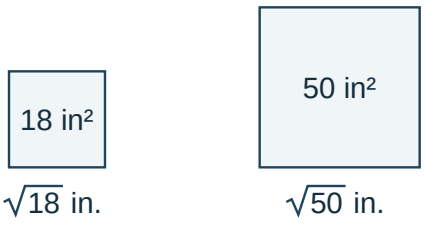
The shrinking display

A display has 60 slots. Its 42 photos fill 70% of them. How many empty slots should be covered so the same photos fill 84% of the visible slots?

02 CH. 9

Side by side

Two square paper tiles have areas of 18 and 50 square inches. A new square has a side equal to the sum of their side lengths. What is its exact area?



03 CH. 10

Turning in pairs

A robot turns left 25°, then left 35°, and repeats this pair. After how many individual turns does it first face its starting direction again?

04 CH. 11

A notch in the sign

A 12 cm by 8 cm sign has a 4 cm wide, 3 cm deep rectangular notch cut from the middle of its top edge. Find the new area and perimeter.



Notch cut from top edge

Prealgebra

Chapters 12–15 | Show your work. Explain how you know.

Name: _____ Date: _____

05 CH. 12

Which panel needs more wire?

A wire runs straight between opposite corners of each rectangular panel. One panel is 9 in. by 12 in.; the other is 8 in. by 15 in. Which needs the longer wire, and by how much?

06 CH. 13

A mistyped reading

Five meter readings are 18, 19, 20, 21 and 22. The last one is mistyped as 220. Which changes, the mean or the median? By how much?

07 CH. 14

Signal flags

A signal has three stripes, each red, blue or yellow. Neighbors must have different colors. How many legal signals are there? In how many do the first and last stripes match?

08 CH. 15

Build a window

A frame is always 3 square panes high. Each pane side uses one stick; neighboring panes share sticks. With 80 sticks, what is the greatest number of full columns you can build?



Two columns shown