

HW SOL 8.1

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Math 8 HW Section 8.1 – Drawing 3D Shapes

1. Given each diagram, count the number of blocks:

<p>a)</p> <p>10</p>	<p>b)</p> <p>9</p>	<p>c)</p> <p>10</p>
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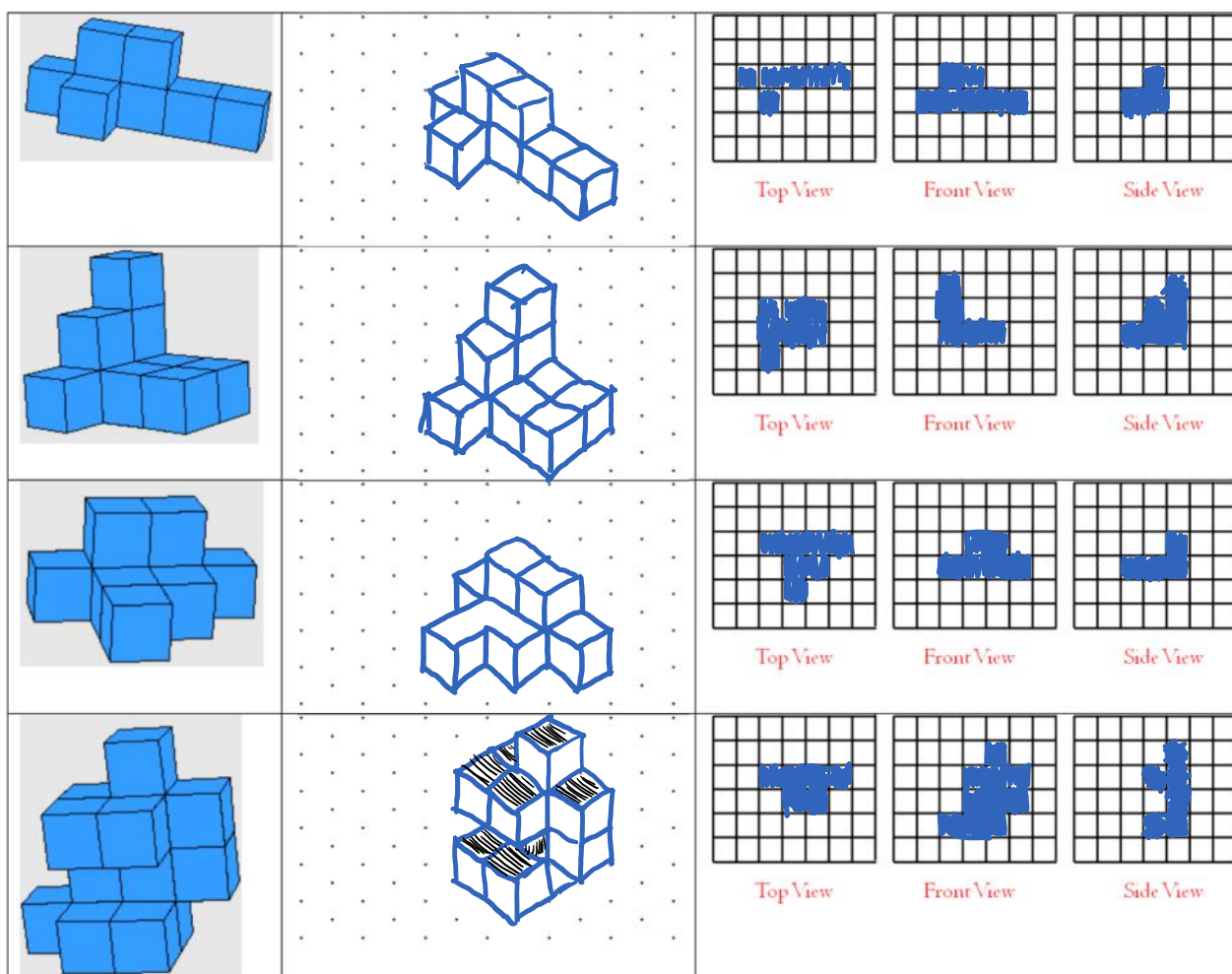
2. Given the images on the left, draw the side views indicated:

	 Top View	 Front View	 Side View
	 Top View	 Front View	 Side View
	 Top View	 Front View	 Side View

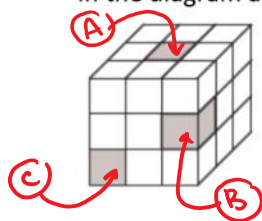
3. Given the views on the left, draw the isometric image with the grid provided:

<p>A.</p> <p>Front: Right: Top: </p>	<p>B.</p> <p>Front: Right: Top: </p>	<p>C.</p> <p>Front: Right: Top: </p>
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4. Given the following images, draw the isometric view and all 3 side views:



5. A 3 X 3 X 3 cube has been assembled using twenty seven cubes. Then the three 1 x 1 x 1 cubes shaded in the diagram are removed. What is the surface area of the remaining solid?



① EACH TIME A CUBE IS TAKEN AWAY, THE SURFACE AREA ALSO INCREASES, B/C MORE SIDES ARE EXPOSED.

② THE ORIGINAL S.A. IS : $9 \times 6 = 54 \text{ units}^2$.

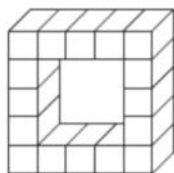
③ IF B/LK A' IS TAKEN, 4 EXTRA SIDES ARE EXPOSED

④ IF B/LK B IS REMOVED, 2 EXTRA SIDES ARE EXPOSED.

⑤ REMOVING B/LK C DOES NOT INCR SIDES EXPOSED.

⑥ SO NEW S.A. WILL BE $54 + 6 = 60 \text{ units}^2$

6. The figure below was constructed by cementing together sixteen 1cm by 1 cm by 1cm cubes. What is the surface area of the figure, in cm^2 ?



① Front : 16 TOTAL : $32 + 20 + 12$
 ② Back : 16 = 64 units^2

③ Top : 5

④ Bottom : 5

⑤ Left : 5

⑥ Right : 5

⑦ Inside : 12

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