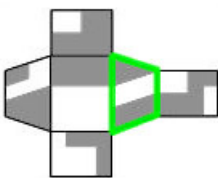


When I am doing Pattern-Folding problems I like to look for patterns that I like and use them as my central focus (when I say "pattern" I mean that in both senses of the word...both the print on a particular panel, and also a combination of qualities or tendencies forming a consistent or characteristic arrangement).

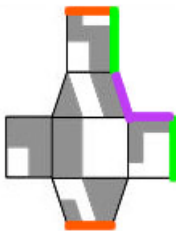
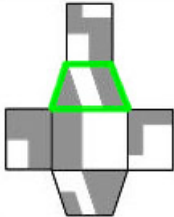
Also, in looking at the available answer choices I notice that they have the figure sitting on its base, with the viewer looking at one of the 2 available end caps. Taking that into account, I'm also going to mentally/visually start off with the end caps and see if there are any patterns that I like.

For instance, I notice that the end cap highlighted in green has a nice white stripe that runs diagonally from the middle of the base of the end cap, up to one corner, then connects with another white section on the top part of the figure.



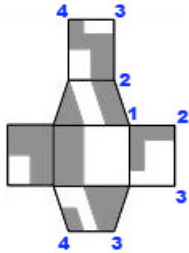
So, I'm going to do 2 things:
1) Put this end cap into the same position as the answer choices, for better reference, and

2) Mentally glue this panel to the screen and have everything else fold back into the page around / behind this "panel of focus".

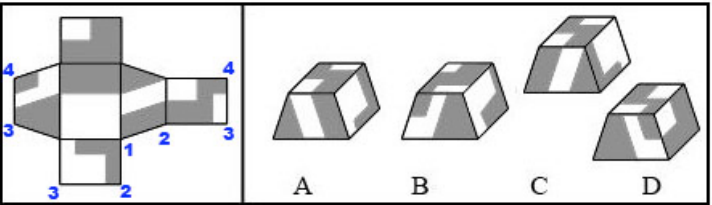


Now, in order for you to better visualize which panels fold where, and are next to which other panels once they are folded, I'm going to use three different methods:

- 1) I'll just use arrows and text to explain what I mean, or
- 2) I'll put matching colored lines along the edges of panels that meet up when folded, or
- 3) I'll assign numbers to the joints where the corners of panels meet. So, in the example on the right, when you fold the pattern into the paper, the #2 on one panel will be joined with the #2 on another panel, the #3's will be joined, #4 with #4, etc., etc.



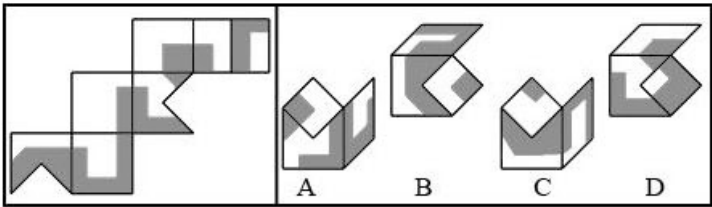
Before we get to the problem at hand, in the interest of my time and my sanity, in some problems I will focus only on explaining why the wrong answers are wrong. By doing it this way, I don't have to explain what is right with each possible answer choice, and subsequently have each problem look like the Los Angeles freeway system with all of my arrows, etc.



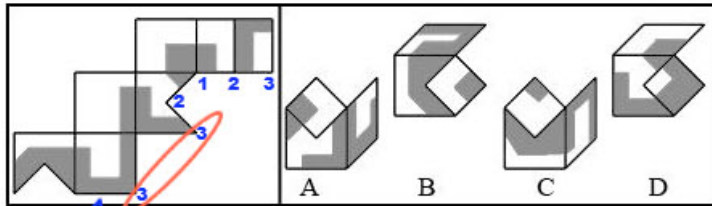
For answer "A", notice that the #2 against the grey "L" panel should line up with the grey stripe on the end panel (also numbered 2). However, the grey "L" in answer "A" is on the opposite side of that side panel, so "A" is out.

For answer "B", there are two ways to negate it. First, the end cap you are shown appears to have a white "J" or left-facing hockey stick. However in the given unfolded pattern, there is a white "L" or right facing hockey stick. Also, in the side panel of answer "B", the white and grey "L" shapes are disproportional and aren't sharp 90 degree angles as in the unfolded pattern given, so "B" is out.

For answer "C", even though the grey "L" on the side panel is in fact touching the grey from the end cap, there are two things wrong with this figure.
1) The grey "L" is not proportional to the one in the given unfolded pattern, and
2) the white diagonal stripe on the end cap is slanted up to the right, instead of to the left as in the given unfolded pattern.

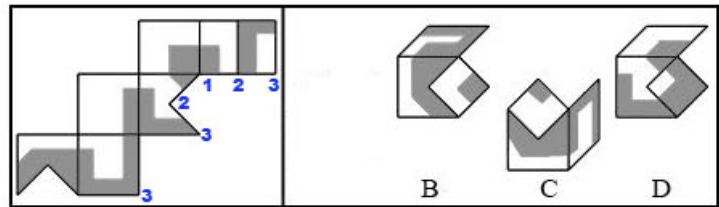


Okay, the first thing that comes to my mind is this..."aside from the patterns on the different panels...what is the most distinguishing part of this folded object?....Right, the fact that it has a "V" (or "Valley"). So, I'll focus on that part of the figure and all of the panel patterns relative (spatially) to that.

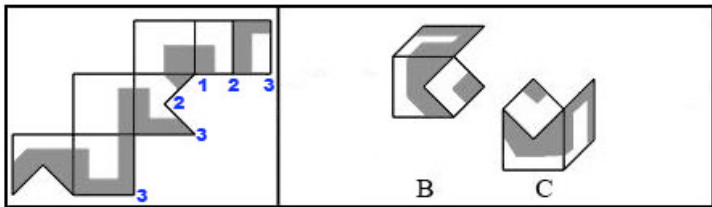


Let's call this cube the grey "J". When you join the middle and bottom 3's, the grey "J" would actually look like a lowercase "r" when viewed from the side as in answer "A". Such is not the case in answer "A". Answer "A" has a vertically flipped "J". So, answer "A" is out.

Answer "D" can be negated a couple of different ways...



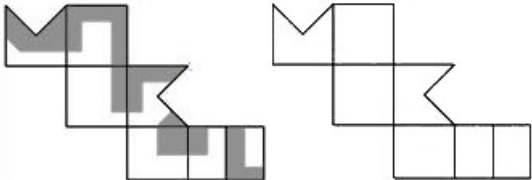
First, if you connect the upper and middle 3's, you'll notice that the result should be the upper 3's WHITE corner touching the middle 3's GREY corner. Answer "D" has grey corner touching grey corner. So, you can forget about answer "D". If you want to see another way to negate answer "D", connect the 2's. Notice that when the 2's are connected, that there should be a grey stripe running along the entire base of the "V" or channel. However, in answer "D", you can see that there is some white in base (or channel) of the "V". So, once again, answer "D" is negated.



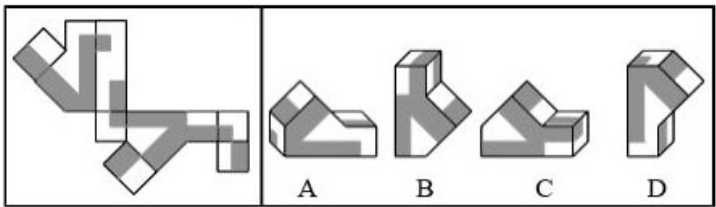
In order for answer "C" to even be possible...



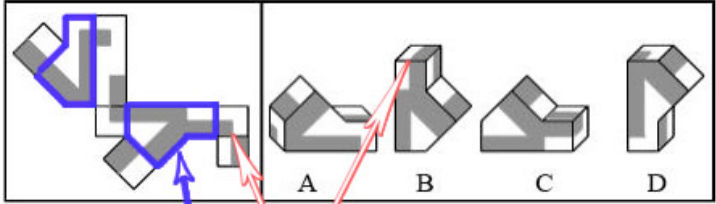
...you'd have to flip the given pattern vertically, (as shown below, left) which you're not allowed to do, obviously. (at least pre-fold). Also, the backside of the original unfolded pattern is totally white, so the vertically flipped figure below (left) would be totally white (as shown on the right, below), because after the vertical flip, you'd be looking at the backside. So, answer "C" is out.



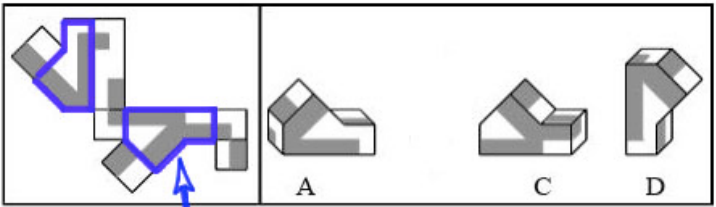
In looking at answer "B", the grey "J" I mentioned at the beginning of the tutorial looks a little fatter than it should. I think this is just an oversight on the part of the person who drew the figure.



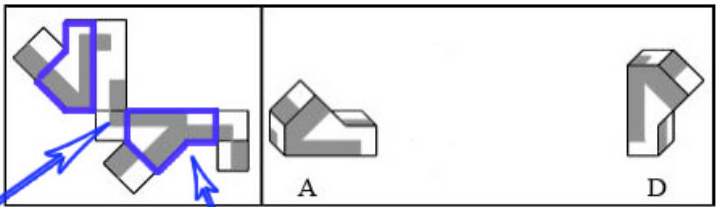
Looking at the possible answer choices, you can see from the unfolded pattern that these are the two main parts or sides of the figure...



If you focus on this panel and stand it up, you'd get the same positioning as answer "B". However, when you fold this "top" down you'll notice that in answer "B" the grey bar goes all the way across the top, but in the unfolded pattern the grey only goes half-way across the "top". So answer "B" is out.



If you focus on this panel again, you should see that there is NO way that you can fold this pattern into answer "C", because the pattern in the unfolded panel in question would actually be on the other side of answer "C" (i.e.: the backside of answer "C", not the side you see in answer "C").



Continue with the logic from the previous figure and remember that this panel will wind up in back when folded.

Now, look at the fact that this small grey square in the corner is touching the aforementioned grey portion on the backside. This small grey square is towards the back in answer "A" which is correct. So, answer "D" is out because the little grey square is on the front side in answer "D".