

# Mr. David's NP-Complete Coloring Book

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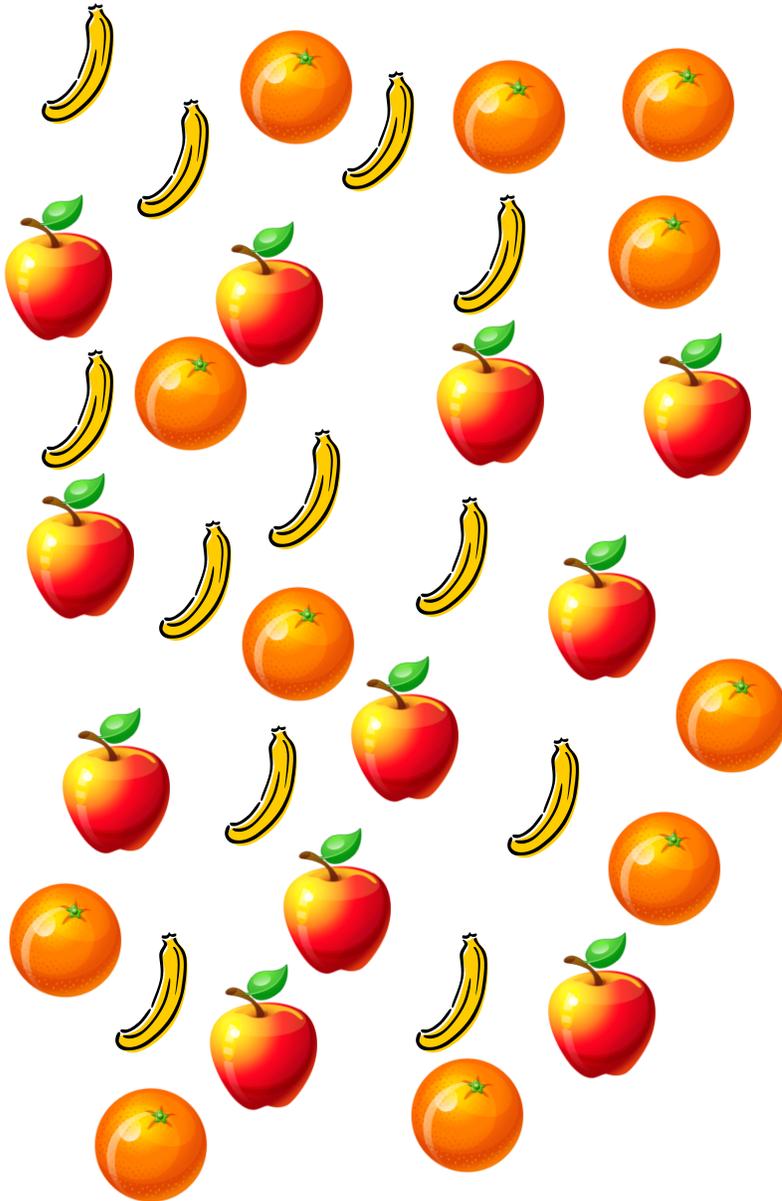


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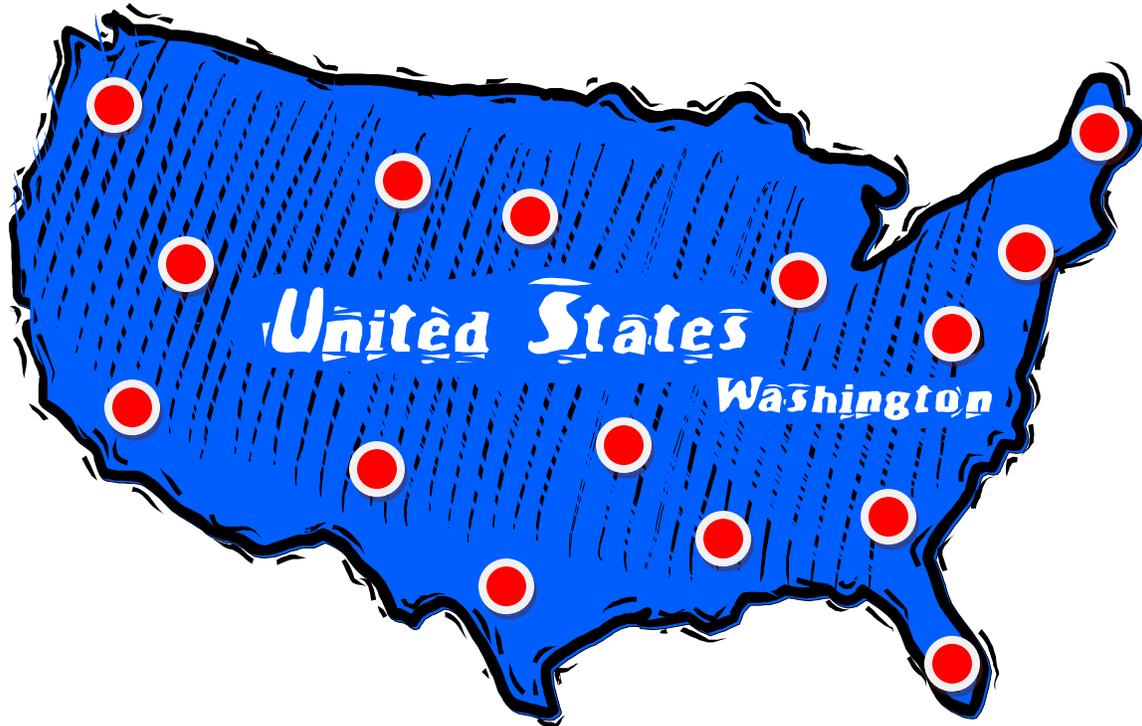
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1.) Nora the Explora is getting ready to go on an adventure with her friend "Haversack". (Can you say "Haversack"? Probably not, you're still having trouble with "r"s and "v"s .)

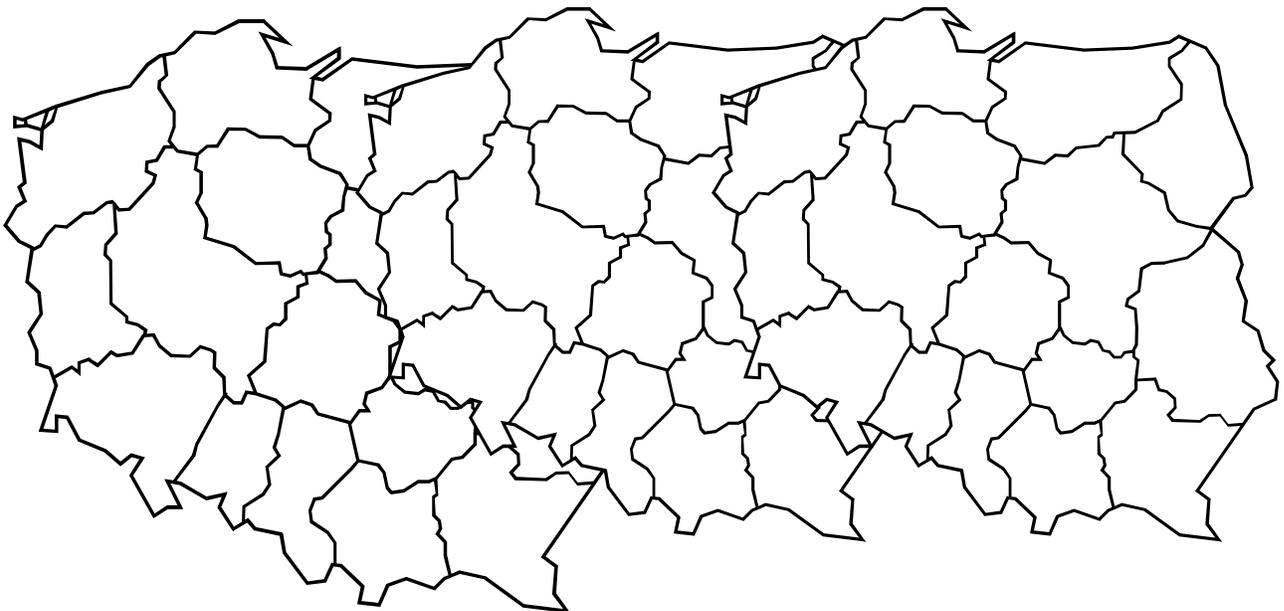
Help Nora pack enough food for the trip. She can bring apples, oranges or bananas. Haversack can carry 20 pounds of fruit. If Bananas have 105 calories, apples have 77 calories and oranges have 85 calories, circle the fruit that Nora should bring on her trip to get the most food. For an extra challenge, take into account that Nora could contract Scurvy without enough Vitamin C. (Can you say "Scurvy"?)



2.) Nora wants to visit all of her favorite places before she has to go to bed and as previously noted Nora has to deal with a limited food supply. Draw the shortest trip for Nora to get to all of the destinations marked on the map.



3.) Nora's friend Map (no way that could be patented) wants a makeover. Color Map with only three colors. Don't let any two touching countries share a color; you'll start a War!



4.) Watch out, it's Piper the pipe-laying fox! Piper is building a plumbing network he calls the "Internet". Help Piper lay a series of tubes to connect your friends. Be careful, for every pipe that you draw that's not necessary, Piper will probably break a finger with that wrench. Remember kids, the Internet is NOT a big truck; it's a series of tubes.



By this time, your child is either in tears, colored all over the pages without following directions or has actually solved everything correctly. If the latter is the case, interview your child on how they did everything so quickly. Send the results to:

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314 Turing Blvd.

Charlottesville, VA 22903

(You could win a small fraction of \$1,000,000!)

If your child asks you why these problems are so hard (or asks you why you can't solve them either) wave your hands around and tell them "Well we don't know if  $P=NP$ ". That should be a completely unsatisfactory answer, and they'll probably start to question other things you tell them (like Santa, the Easter Bunny, etc.)

Poetic License: The weights of each fruit should be included in 1, but by that time the kid has probably stopped listening. The approximate time for contracting Scurvy is 3 months without Vitamin C. I KNOW that both 2 and 4 are the travelling salesman problem. But little kids have no idea.

Acknowledgements: All images come from Microsoft ClipArt, Dora the Explorer is a registered Trademark of Nickelodeon or some larger, scarier company.