

NAME _____

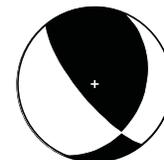
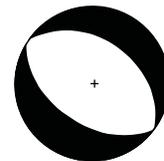
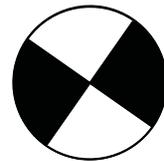
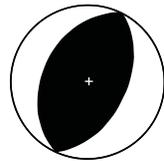
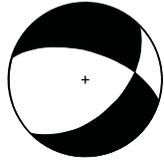
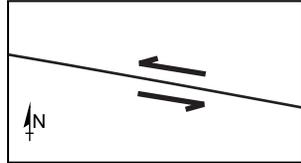
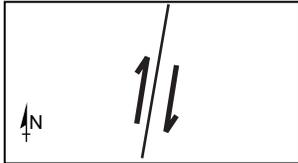
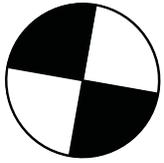
Name the type of faults shown in each of these focal mechanism plots (in words) and draw the two possible faults onto the maps (with correct map symbols). One example has been completed for you.

Fault type

Possible Map 1

Possible Map 2

conjugate
strike-slip



Rate your confidence in your answers:
 not at all very sure
 1 2 3 4 5

NAME _____

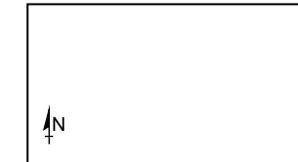
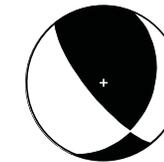
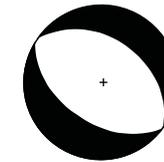
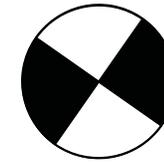
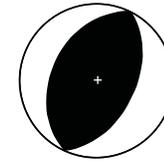
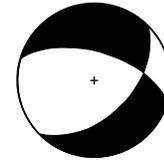
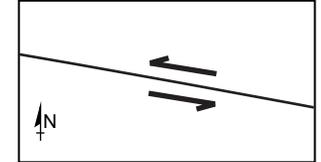
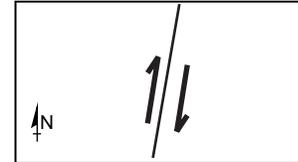
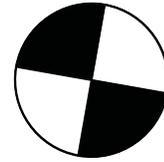
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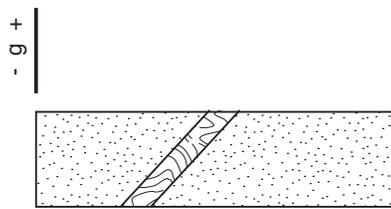
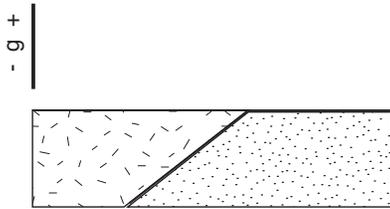
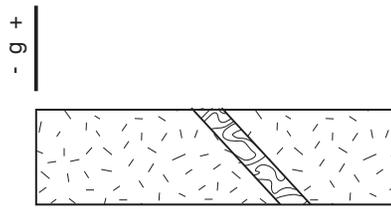
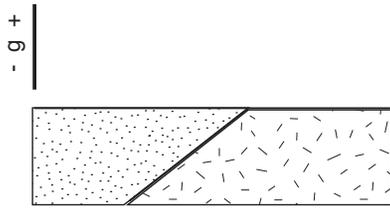
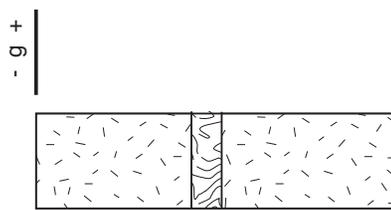
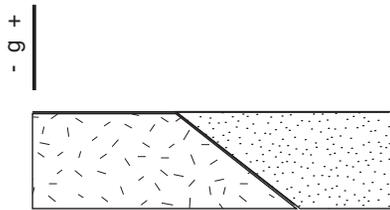
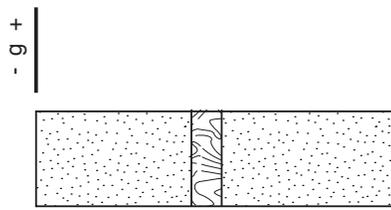
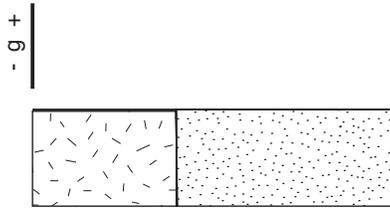
Rate your confidence in your answers:
 not at all very sure
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NAME _____

Draw the approximate gravity profiles that you might measure above these geologic faults and shear zones.

-  granite
-  shear zone
-  sandstone

relative densities:
granite > shear zone > sandstone



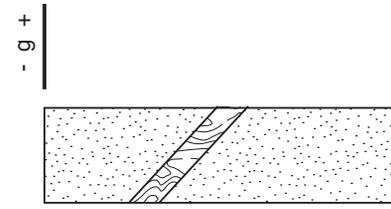
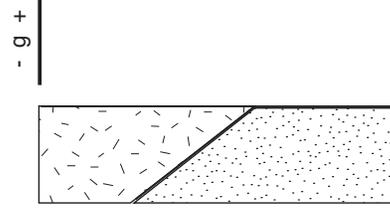
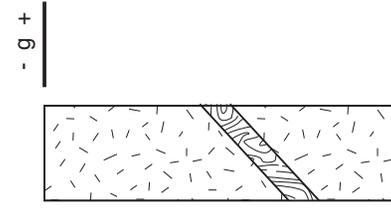
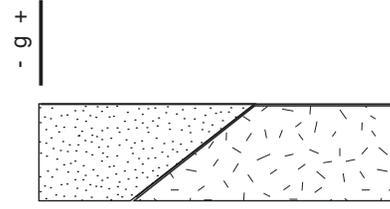
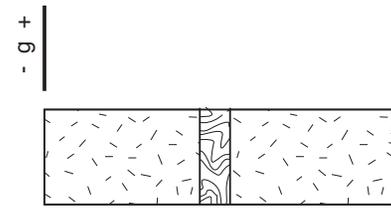
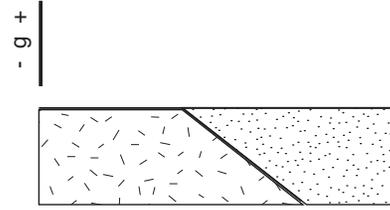
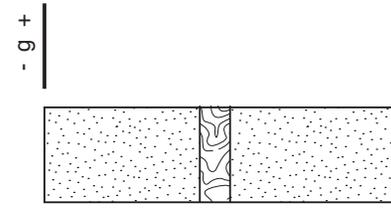
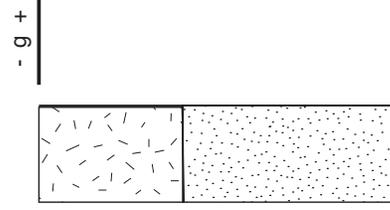
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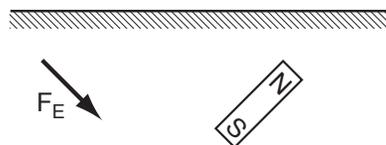
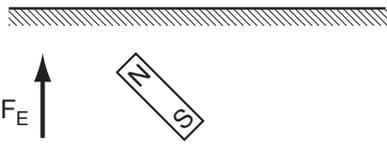
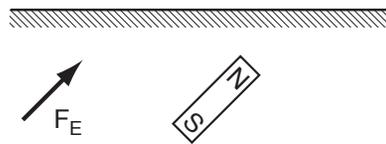
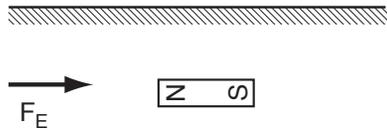
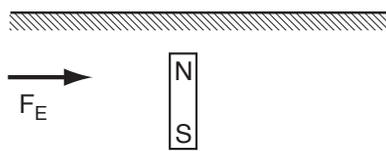
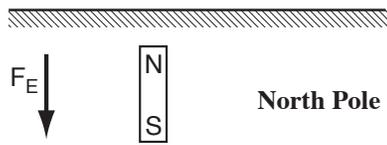
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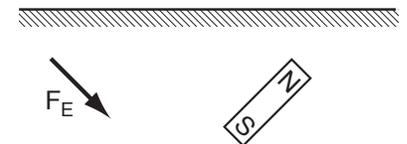
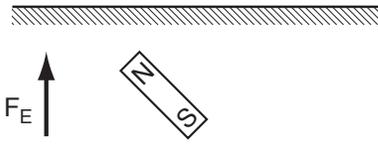
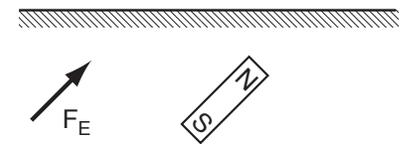
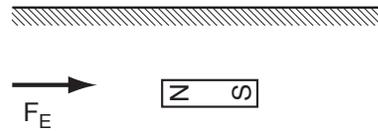
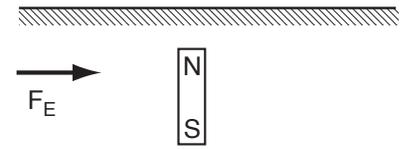
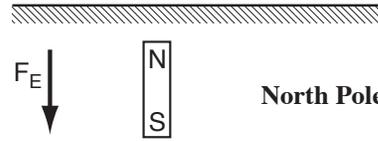
For each of the following cartoons, sketch the approximate magnetic profile that you would expect over the buried dipole given the orientation of the magnetic field at each point. The gray line represents the ambient magnetic field (without the buried dipole). Also indicate the approximate latitude for each cartoon. An example is provided.



Rate your confidence in your answers: not at all $\xrightarrow{\quad\quad\quad}$ very sure
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For each of the following cartoons, sketch the approximate magnetic profile that you would expect over the buried dipole given the orientation of the magnetic field at each point. The gray line represents the ambient magnetic field (without the buried dipole). Also indicate the approximate latitude for each cartoon. An example is provided.



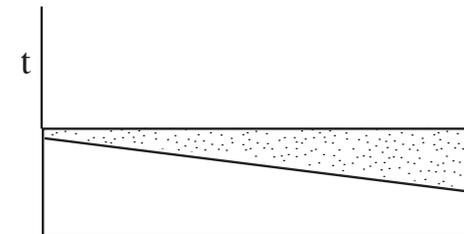
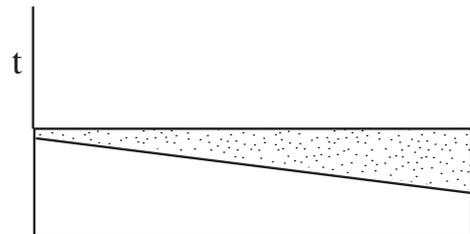
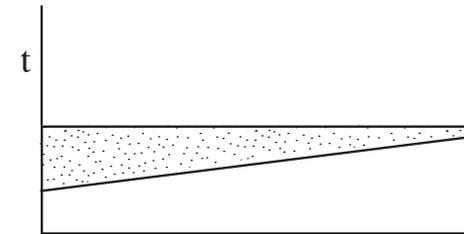
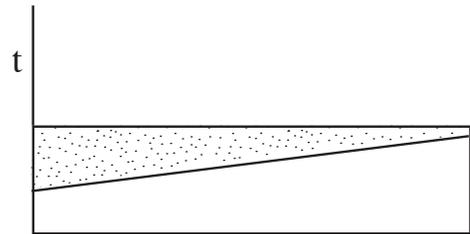
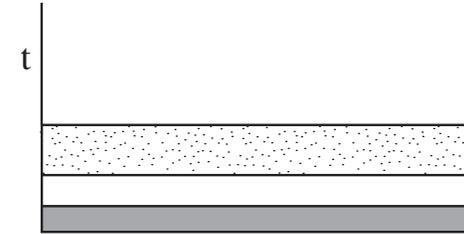
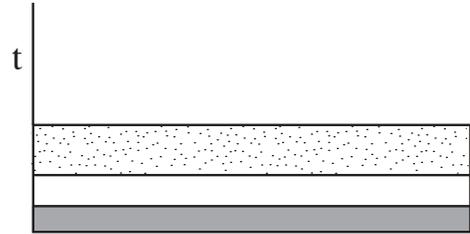
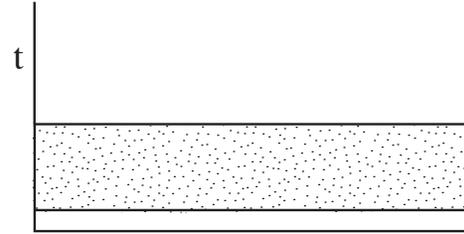
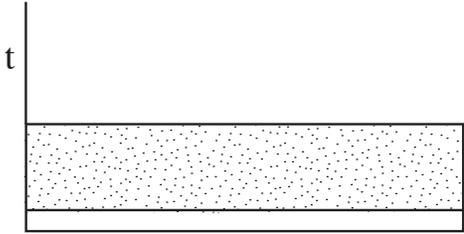
Rate your confidence in your answers: not at all $\xrightarrow{\quad\quad\quad}$ very sure
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Draw the forward and reverse travel-time curves in a seismic refraction experiment for the bedrock geometries below. Assume velocity increases with depth. Describe major features of each travel-time curve in words in the data space adjacent to the cartoon.

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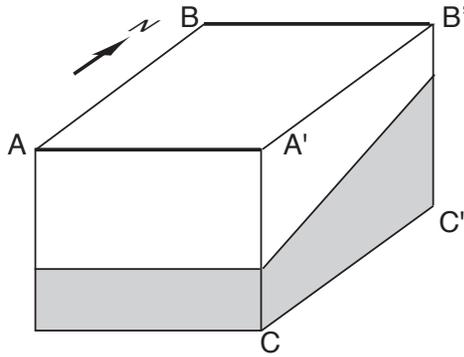


Rate your confidence in your answers: not at all 1 2 3 4 5 very sure

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The block diagram on the right shows a dipping layer. Draw the forward and reverse travel-time curves for seismic refraction profiles across A-A', B-B', and C-C'

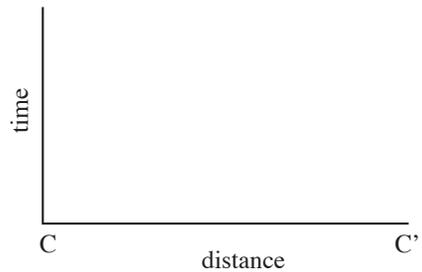
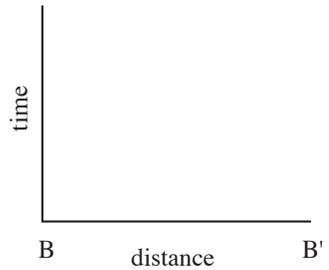
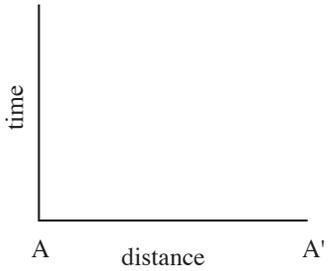


Questions:

(1) Compare/contrast the travel-time curves for these three profiles.

(2) If you only had enough money to collect data from one seismic refraction profile, which profile would you chose and why?

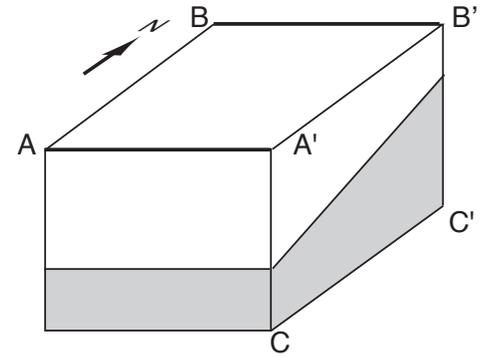
(3) Describe the orientation of your chosen profile relative to that of the overall geometry of the geologic structure?



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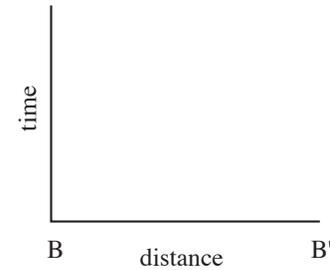
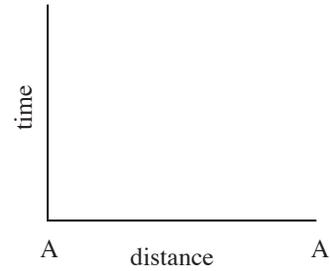


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