1. Figuring out Mileage - Taking the scale of miles on the map, figure out how many miles it is between stations. Finish the chart below with the mileage.

| Station | Wood <br> Valley | Snow <br> Mountain | Grand <br> Junction | Glenwood | Buck <br> Village | South <br> Valley |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Wood Valley | X |  |  |  |  |  |
| Snow Mt. |  | X |  |  |  |  |
| Grand Junction |  |  | X |  |  |  |
| Glenwood |  |  |  | X |  |  |
| Buck Village |  |  |  |  | X |  |
| South Valley |  |  |  |  |  | X |

Figuring out Travel Time: Train speeds vary between stations. Using the mph chart below, figure out how much time it takes to go between stations. Figure this by dividing the distance given in miles by the MPH in minutes (miles per hour divided by 60 ). Add on 2 extra minutes for each station stop and five extra minutes for stops in Wood Valley or South Valley. Complete the chart below.

| Station | MPH | Departing <br> Station Layover | 1. Train <br> Speeds | Total TIme |
| :--- | :--- | :--- | :--- | :--- |
| Wood Valley-Snow Mt | 90 | 5 minutes |  |  |
| Snow Mt.-Grand Jct | 40 | 2 minutes |  |  |
| Grand Junction-Glenwood | 115 | 2 minutes |  |  |
| Glenwood-Buck Village | 65 | 2 minutes |  |  |
| Buck Village-South Valley | 65 | 2 minutes |  |  |
| South Valley-Buck Village | 65 | 5 minutes |  |  |
| Buck Village-Glenwood | 49 | 2 minutes |  |  |
| Glenwood-Grand Junction | 115 | 2 minutes |  |  |
| Grand Jct -Snow Mountain | 40 | 2 minutes |  |  |
| Snow Mt -Wood Valley | 90 | 2 minutes |  |  |

Now make a daily schedule with 30 trains using the following criteria:
A. There are two express trains, one eastbound and one westboundwith only two regional stops, Grand Junction and Glenwood.
B. There are two express trains, one eastbound and one westboundthat travel between Grand Junction and South Valley with a stop in Glenwood.
C. There are eight regional trains, four northbound and four southbound between Wood Valley and Grand Junction. Half of them stop in Snow Mt.
D. There are sixteen local trains, eight in each direction running between South Valley and Wood Valley. They stop at all six stations on the route.
E. There are two late night trains, one in each direction leaving after midnight between Wood Valley and Glenwood and stopping at all stations .

Fill in the chart below. The color codes give a hint by showing similar train routes.

| Stations | Train | 22 | 42 | 32 | 44 | 24 | 34 | 2 | 26 | 46 | 36 | 48 | 4 | 28 | 38 | 52 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Read Down |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wood Valley | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Snow Mt. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Grand Jct. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Glenwood |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Buck Village |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| South Valley | $\checkmark$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

WESTBOUND - South Valley to Wood Valley

| Stations | Train | $\mathbf{3 1}$ | $\mathbf{4 1}$ | $\mathbf{2 1}$ | $\mathbf{4 3}$ | $\mathbf{3 3}$ | $\mathbf{1}$ | $\mathbf{2 3}$ | $\mathbf{3 5}$ | $\mathbf{3}$ | $\mathbf{4 5}$ | $\mathbf{2 5}$ | $\mathbf{4 7}$ | $\mathbf{3 7}$ | $\mathbf{2 7}$ | $\mathbf{5 1}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | Read <br> Up |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wood Valley | $\mathbf{4}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Snow Mt. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Grand Jct. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Glenwood |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Buck Village |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| South Valley |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

