1. How is the Appalachian Region defined? How many US States are included?
The Appalachian Region is defined geographically by the Appalachian Mountains and by the Appalachian Regional Commission. It stretches across 13 states from southern New York to northern Mississippi.

2. Provide some context on how rural Appalachia compares to the rest of rural America, specifically, in:
• Population and demographics
   - Rural counties in Appalachia experienced a much higher rate of population decline between 2010 and 2023 than rural counties
   - The population in rural Appalachia is also older has a smaller share of residents under age 18
   - Rural Appalachia is also much less racially and ethnically varied
• Education
   - Education levels are lower in rural Appalachia than in rural areas in the rest of the country
• Employment
   - The share of rural Appalachian adults ages 25 to 64 in the civilian labor force is 8.4 percentage points lower than in rural counties outside the Appalachian Region, and the unemployment rate is slightly higher
• Income and poverty
   - Adults in rural Appalachia have lower levels of income and higher rates of poverty and receipt of SNAP benefits than in rural counties outside the Appalachian Region
• Broadband access
   - The share with a broadband (high-speed) Internet connection (81.4 percent) are at least three percentage points lower than for households in rural counties outside the region.

3. Briefly describe each of the five listed goals in the ARC's Strategic Plan for investing in the Appalachian Region
(https://www.arc.gov/strategicplan/).

   ● Goal 1: Building Appalachian businesses through entrepreneurship and business development.
   ● Goal 2: Building Appalachia's workforce ecosystem by expanding healthcare, childcare, education, housing, etc.
   ● Goal 3: Building Appalachia's infrastructure to allow residents to have reliable and affordable infrastructure to allow them to easily live and work in the region
   ● Goal 4: Building regional culture and tourism to strengthen the community and develop the economy through the region's local cultural heritage and environment.
   ● Goal 5: Building community leaders and capacity through investing in local leaders, organizations, and communities to combat any issues/challenges by providing technical assistance, resources, and engaged partners.

Summary Definition of average unemployment rate, per capita market income, and poverty rate
- Average unemployment rate
    - The average unemployment rate is measured by a three-year average, by dividing the three-year sum of persons unemployed by the three-year sum of the civilian labor force
- Per capita market income
    - The per capita market income is measured by a three-year average, by calculating the personal income of residents (calculated from government and business transfer payments, and government interest). of a given area divided by the resident population of the area.
- Poverty rate
    - The poverty rate is measured by a three year average, by calculating the ratio of persons below the poverty level (people whom are not in institutionalized persons, persons in military group quarters and in college dormitories, and unrelated individuals under 15 years old (foster children)), to the total number of those whose obtain poverty status.

Definition of poverty threshold:
(https://www.irp.wisc.edu/resources/what-are-poverty-thresholds-and-poverty-guidelines/)
The poverty threshold is a dollar amount set by the US government that indicates how much money a person or family needs to meet their basic needs. Anyone who falls below the dollar amount threshold is considered low-income.

7. The mean poverty rate of 14.4% shows the average share of people living in poverty across all Appalachian counties. The standard deviation of 6.1% indicates how much poverty rates differ from one county to another, some areas experience much higher poverty levels, while others are closer to or below the average.

11.

State	# Counties	PCI (Mean)	PCI (Median)	Poverty Rate
Texas	254.0	nan	nan	15.04
Georgia	159.0	nan	nan	18.33
Kentucky	120.0	nan	nan	19.26
Missouri	115.0	nan	nan	15.22
Virginia	105.0	nan	nan	12.39
Kansas	105.0	nan	nan	11.68
Illinois	102.0	nan	nan	12.65
North Carolina	100.0	nan	nan	15.93
Iowa	99.0	nan	nan	10.68
Tennessee	95.0	nan	nan	16.07

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When the thousands=',' is removed, the program treats numeric values as strings. Pandas cannot perform calculations (mean or standard deviation).

15.
The top-poverty counties, Todd, Oglala Lakota, and Mellette, have extremely high poverty rates (around 50–60%) and very low per-capita incomes. Their average unemployment is also above the U.S. average.

       For example, Todd County's poverty rate is 59% while others in South Dakota are far lower. Many of these high-poverty counties lie on Native American reservations, where limited job opportunities, rural isolation, and restrictions on land ownership contribute to persistent poverty. (thedakotascout)

       Low-poverty counties tend to have higher PCI, better access to infrastructure, and more diverse economies. These patterns highlight how economic hardship can be highly localized, even within one state.