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| **Skill 1.1 Exercise 1** |
| For each data set below, identify the largest number and the smallest number. |
| 100010 636256 9898989 12121212 789123 123800 8907618  9875671 10101010 98111111 8787877 98989891  9876512 6780987 1237659 89898910 7424048 76654321    8787856 7659999 99887766 78956430 12914651  9999988 1628760 2222290 10926382 9187656 10987654 |
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| **Skill 1.1 Exercise 2** |
| For which data set was it easiest to identify the largest and smallest number? Why? |
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| Why do people make visualizations out of data? |
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| **Skill 1.2 Exercise 1** |
| List the steps in the data analysis process. |
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| **Skill 1.3 Exercise 1** |
| Below is a portion of a data set that contains information about different dog breeds. For each column, indicate whether it stores quantitative or qualitative data.   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Breed Name** | **Breed Group** | **Bred For** | **Min Life** | **Max** | **Min Height** | **Max Height** | **Min Weight** | **Max Weight** | **Temperament** | | Affenpinscher | Toy | Small rodent hunting, lapdog | 10 | 12 | 9 | 12 | 6 | 13 | Stubborn, Curious, Playful, Adventurous, Active, Fun-loving | | Afghan Hound | Hound | Coursing and hunting | 10 | 13 | 25 | 27 | 50 | 60 | Aloof, Clownish, Dignified, Independent, Happy | | Airedale Terrier | Terrier | Badger, otter hunting | 10 | 13 | 21 | 23 | 40 | 65 | Outgoing, Friendly, Alert, Confident, Intelligent, Courageous | |
| |  |  | | --- | --- | | **Column** | **Data type (quantitative/qualitative)** | | Breed Name |  | | Breed Group |  | | Bred For |  | | Min Life |  | | Max Life |  | | Min Height |  | | Max Height |  | | Min Weight |  | | Max Weight |  | | Temperment |  | |

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| **Skill 1.4 Exercise 1** |
| Open the dog data set, <https://docs.google.com/spreadsheets/d/1dy2TrqRqXNcq-0k4ciLcATcPINv8u1eNPWhbJRuYYjU/edit?usp=sharing>  For each column indicate whether the data would be best visualized using a bar chart, histogram chart, or neither. |
| |  |  | | --- | --- | | **Column** | **Histogram, Bar, or Neither** | | Name |  | | Breed Group |  | | Bred For |  | | Minimum Life Span |  | | Maximum Life Span |  | | Minimum Height |  | | Maximum Height |  | | Minimum Weight |  | | Maximum Weight |  | | Temperament |  | | Image |  | |
| For each column you indicated as best being visualized as a *histogram*, indicate a corresponding bucket size that would be suitable for visualizing the data. |
| |  |  | | --- | --- | | **Column** | **Bucket Size** | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | |

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| **Skill 1.5 Exercise 1** |
| The data below was collected from students using a survey. Indicate how you would *clean* the data by crossing out the incorrectly formatted data and replacing it with what was intended.  A screenshot of a computer  Description automatically generated |
| You are a developer and have been asked to create a web-based form to collect the above data. What could you do to better ensure the user entered clean data? |
|  |