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For intervention tips, click here to head to my blog post, "6 Tips for Making Math Intervention Work in the Middle Grades."

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DATA TRACKING

PROGRESS TR

STATISTICAL QUESTIO

Name	Review Sheet	Extra Practice	Error An

PROGRESS TRACKING

MEASURES OF CENTER & VARIATION

Name	Review Sheet	Extra Practice	Error Analysis

PROGRESS TRACKING

HISTOGRAMS

Name	Review Sheet	Extra Practice	Error Analysis

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TRACK STUDENT PROGRESS

PRE AND POST ASSESSMENT TRACKING

DATA DISPLAYS & MEASURES OF CENTER

Name	Pre-Assessment	Post-Assessment	Notes

PRE + POST ASSESSMENTS

Name: _____ Date: _____

DATA DISPLAYS & MEASURES OF CENTER PRE-ASSE

Directions: Read each problem carefully.
Show work when needed.

1) A student wants to investigate whether the weights of backpacks carried by
Which question would help the student collect appropriate data?
a) How much does one 6th grader's backpack weigh?
b) How many 6th graders brought backpacks to school today?
c) How much does each 6th grader's backpack weigh?
d) How many backpacks are stored in the 6th grade classrooms?

2) A student asks, "How many seats are in our school auditorium?" Is this a statisti
Explain.

For #3 – 6: Use the number of minutes eight customers waited for a haircut:
7, 13, 9, 15, 11, 9, 17, 15

3) Find the mean. 4) Find the median. 5) Identify the mode. 6) Find

7) A garden center recorded the number of plants bought in each of 14 transac
weekend. Create a dot plot using the data.
2, 5, 6, 6, 4, 3, 7, 5, 3, 8, 4, 6, 5, 3

DATA DISPLAYS & MEASURES OF CENTER ASSESSMENT

9) The weights, in pounds, of 16 packages shipped from a warehouse is given. Create a histogram using the intervals 40 – 59, 60 – 79 and 80 – 99.

42, 68, 83, 57, 91, 76, 64, 88, 53, 72, 95, 61, 79, 46, 85, 69



10) A worker claims that most packages weigh less than 80 pounds. Is this statement supported by the histogram? Explain.

11) The number of hours 12 volunteers contributed to a community project were: 12, 18, 22, 26, 32, 38, 42, 46, 52, 58, 62, 68. Find the five-number summary and create a box plot.

1a) Is the question statistical? * 1 point

How many children are in your math class?

- Yes
- No

1b) IF YOU ANSWERED NO IN 1a, rewrite the question below to make it statistical. 1 point

How many children are in your math class?

Your answer

2a) Is th 1 point

H
c

2b) IF YOU question below to make it 1 point
statistical.

PRE/POST ASSESSMENTS IN PRINT AND GOOGLE FORMS

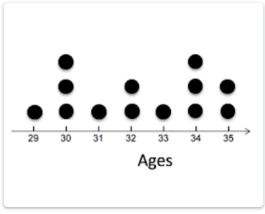
6) Find the range of the number of siblings. * 5 points

2, 3, 4, 1, 0, 2, 2, 1, 2, 3, 5, 0, 2, 1, 2, 1

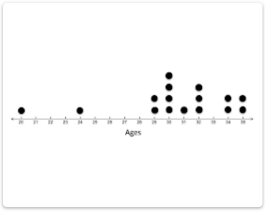
Your answer

7) Which dot plot represents the data shown about ages? * 1 point

30, 32, 24, 20, 31, 34, 35, 29, 30, 35, 34, 33, 34, 32, 30



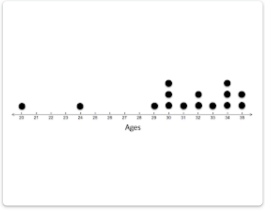
A



B



C



D

8) Which histogram represents the data shown about the miles traveled to school? * 1 point

15, 10, 22, 34, 10, 9, 30, 27, 18, 16, 15

SKILLS REVIEW

SKILL RE

STATISTICAL QUESTION

Key Concepts:

- A statistical question anticipates variability in the data collected. This means the answers are expected to be different.
  - Example: How many minutes do sixth-grade students spend reading each day?
- A nonstatistical question asks for a specific answer without expecting variability.
  - Example: How many minutes did Jordan spend reading yesterday?

How I feel about this conc

- ☐ I Completely Get It
- ☐ I'm Stru
- ☐ I've Almost Got It
- ☐ I'm Lost

I still don't understand:

Practice:

For 1 – 4: Determine whether each question is statistical or nonstatistical.

1) How many minutes do students at your school spend eating lunch?	2) How many books are on the shelf in your classroom right now?	3) What is the average number of text messages sixth graders send each day?	4) How many in of rain fell in y town yesterd
statistical / nonstatistical	statistical / nonstatistical	statistical / nonstatistical	statistical / nonstatistic

5) A student wants to know how much time sixth graders spend outdoors after school

6) A student wants to know how many pages are in one specific library book

SKILL RE

MEASURES OF CENTER & VARIATI

Key Concepts:

- **Mean:** The *average* of a data set. Add all values and divide by the number of values.
- **Median:** The *middle* value when data is arranged from least to greatest. If there are two middle values, find their average.
- **Mode:** The value that appears *most* often. A data set may have one mode, more than one mode, or no mode.
- **Range:** The *difference* between the greatest and least values. Range measures variation (spread), while mean, median, and mode describe the center or common values.

How I feel about this conce

- ☐ I Completely Get It
- ☐ I'm Strugg
- ☐ I've Almost Got It
- ☐ I'm Lost

I still don't understand:

Practice:

de, and range of the
nt reading last night:

15, 24

M

Mode: ge:

GUIDED PRACTICE AND STUDENT RESPONSE

SKILL REVIEW

BOX PLOTS

Key Concepts:

- A **box plot** displays the distribution of numerical data using five values: minimum, first quartile (Q1), median, third quartile (Q3), and maximum.
- **Q1** is the median of the lower half of the ordered data. **Q3** is the median of the upper half.
- The box extends from Q1 to Q3, with a line at the median. The whiskers extend to the minimum and maximum.
- The **interquartile range (IQR)** is Q3 – Q1. It describes the spread of the middle 50% of the data.

How I feel about this concept:

- ☐ I Completely Get It
- ☐ I'm Struggling
- ☐ I've Almost Got It
- ☐ I'm Lost

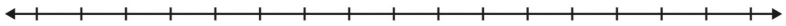
I still don't understand:

Practice:

The number of minutes 12 students spent working on a science project are given below.

25, 40, 30, 55, 35, 45, 60, 30, 50, 35, 45, 40

Create a box plot to display the data. Then find the interquartile range (IQR).



SKILL REVIEW

HISTOGRAMS

Key Concepts:

- A **histogram** displays numerical data grouped into intervals.
- The height of each bar shows the frequency, or number of values, in that interval.
- Intervals must not overlap or leave gaps in the range of values being displayed. They should have equal widths.
- Histogram bars touch because the intervals represent continuous ranges of numerical values.
- Histograms help us identify where data is concentrated and describe its overall distribution.

How I feel about this concept:

- ☐ I Completely Get It
- ☐ I'm Struggling
- ☐ I've Almost Got It
- ☐ I'm Lost

I still don't understand:

Practice:

The list below shows the number of minutes 20 students spent completing a math challenge.

18, 24, 32, 27, 41, 35, 22, 29, 38, 44, 31, 26, 19, 36, 42, 28, 33, 21, 39, 25

Create a histogram using the intervals 15 – 24, 25 – 34, 35 – 44.
Label both axes and use a frequency scale that fits the data.



PRACTICE WORKSHEETS

EXTRA PRA

BOX PLOTS

For #1 – 4: Use the box plot to answer the questions.



1) Identify the:
- Minimum _____
- Maximum _____
- Median _____

2) Find the interquartile range (IQR). Wh
it tell you about the walking times?

3) Can you identify the mean walking time from this box plot? Explain.

4) Which half of the data has a greater the lower half or the upper half? Use graph to support your answer.

5) The list below gives the number of points earned by 14 students during a class competit

18, 24, 32, 20, 28, 36, 22, 30, 26, 40, 24, 34, 38, 16

EXTRA PRACTICE

STATISTICAL QUESTIONS

For #1 – 6: Determine whether each question is statistical or nonstatistical. If a question is nonstatistical, rewrite it to make it statistical.

1) How many inches of rain fell in different Florida cities during September?
statistical | nonstatistical

2) How many customers visited the grocery store yesterday?
statistical | nonstatistical

3) What is the typical number of hours 6th graders spend using their phones each day?
statistical | nonstatistical

4) How many miles did the school bus travel on its morning route today?
statistical | nonstatistical

5) How much money did each sixth-grade class collect during the school fundraiser?
statistical | nonstatistical

6) How many points did the home team score in Friday's basketball game?
statistical | nonstatistical

7) Write a statistical question about shoe sizes.

8) Write a statistical question about transportation.

EXTRA PRACTICE

MEASURES OF CENTER & VARIATION

Directions: Find the mean, median, mode, and range for each data set.

The high temperatures (in °F) over 8 days were:

68, 72, 75, 70, 72, 78, 74, 75

Mean: _____ Median: _____

Mode: _____ Range: _____

Which measure of center would you use to describe a typical temperature during the days? Explain your choice.

Eight st… they earned doing chores las…

12, $10, $84

M… _____

M… _____

On… es this affect the mean? Wh…
mea… arnings? Explain.

BASIC PRACTICE FOR EACH SKILL

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…archer wants to know whether

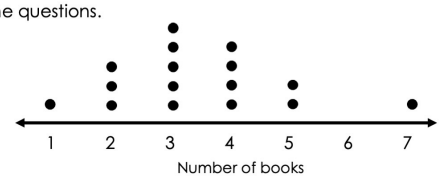
10) Explain why "What is the average

EXTRA PRACTICE

DOT PLOTS

Directions: Use the given dot plots to answer the questions.

The dot plot shows the number of books read by a group of students during summer break. Use the graph to answer questions 1 – 4.



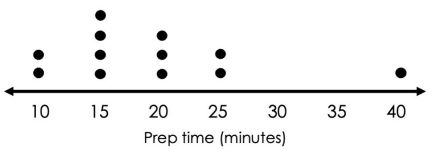
1) How many students participated in the survey?

2) What is the mode of the data? Explain how the graph shows this.

3) What is the median number of books read?

4) Describe one cluster and one gap in the data.

The dot plot shows the number of minutes it took a restaurant to prepare 12 takeout orders. Use the graph to answer questions 5–8.



5) What is the range of the preparation times?

6) How many orders took less than 20 minutes to prepare?

7) One order took considerably longer than the others. How would removing that order affect the range?

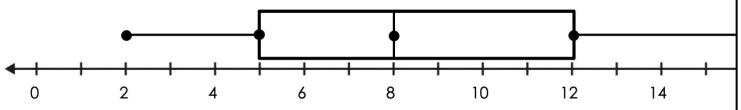
8) Describe the overall distribution of preparation times. Use evidence from the dot plot.

ERROR ANALYSIS

ERROR ANALYSIS

BOX PLOTS

For #1 & 2: The box plot shows the number of hours each week spent on recreational ac



1) What is the median number of hours?

Student's answer:
5 hours, because that's where the box begins.

Describe the error. What is the correct

2) What is the interquartile range?

Student's work:
16 – 2 = 14 hours

Describe the error. What is the correct

3) A student created the following box plot to display the number of minutes 12 people waiting for a train.

6, 10, 14, 8, 18, 12, 20, 10, 16, 24, 14, 8



ERROR ANALYSI

STATISTICAL QUESTIONS

Directions: Identify and correct each error.

1) Is the question statistical? If not, rewrite it to make it statistical.

What is the most common number of books read by students in sixth grade last month?

Student's answer:
Nonstatistical because the question asks for only one number.

2) Explain the error made in #1.

What is the correct answer?

3) Is the question statistical? If not, rewrite it to make it statistical.

How much does the trophy in the school office weigh?

Student's answer:
Statistical because you have to collect data by weighing the trophy.

4) Explain the error made in #3.

What is the correct answer?

5) Write a statistical question about movies.

Student's answer:
How long is the movie we watched in class yesterday?

6) Explain the error made in #5.

Write a statistical question about movies.

udent wants to investigate how much

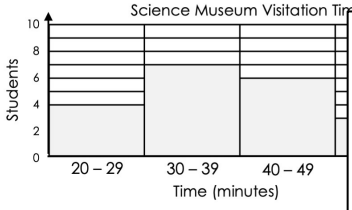
8) Explain the error made in #7.

ERROR ANALYSIS

HISTOGRAMS

Directions: Identify and correct each error.

The histogram shows the amount of time students spent at a science museum.



1) How many students spent at least 50 minutes at the museum?

Student's answer:
9 students because 6 + 3 = 9

Describe the error. What is the correct

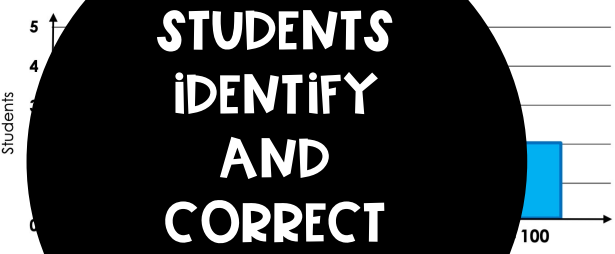
2) What is the most common amount of time students spent at the museum?

Student's answer:
45 minutes, because that's the middle of the t

Describe the error. What is the correct

3) A student recent quiz scores from the table.

62	52
73	65
84	75
51	90



Were

STUDENTS IDENTIFY AND CORRECT ERRORS

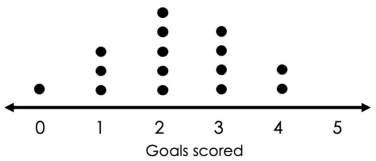
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ERROR ANALYSIS

DOT PLOTS

Directions: Identify and correct each error.

For #1 & 2 : The graph shows the number of goals scored by a youth soccer team in 15 games



1) In how many games did the team score at least 3 goals?

Student's answer:

11 games, because I counted all the games with 2 or more goals.

Describe the error. What is the correct answer?

2) What is the mode of the goals scored?

Student's answer:

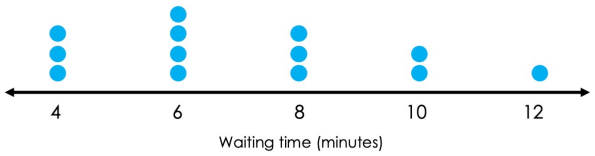
5 goals because 5 is the tallest stack of dots.

Describe the error. What is the correct answer?

3) A student recorded the number of minutes 14 classmates spent waiting in the cafeteria line.

4, 6, 8, 6, 10, 4, 8, 6, 12, 8, 10, 6, 4, 8

The student created the following dot plot.



Identify the error in the student's dot plot. Explain how to correct it.