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Brain Teaser 12



Tricky Averages

The **mean**, **median**, and **mode** are all verifiable averages. But sometimes one more clearly represents a set of data better than another.

Directions: Look at the data below. Calculate the mean, median, and mode. Consider the needs of each person's perspective. Then, decide which average is best.

Annual Job Salaries at One's Employer's Business

\$30,000	\$35,000	\$30,000	\$40,000	\$37,000
\$60,000	\$48,000	\$30,000	\$40,000	\$80,000

- mean: _____
- median: _____
- mode: _____
- If you were the employer trying to attract the best people to hire, which average would you list in a want ad? Why? _____

- If you were considering to come to work for this employer, which average salary would you like this company to tell you? Why? _____

- A toy company tells you the average cost of a specific kind of doll is \$30. Your favorite aunt collects these dolls, and you wish to buy one for her. Do you hope this advertised average is the mean, median, or mode? Why? _____

- If you were the toy company, which average would you advertise to entice more people into the store? _____

- Each of these sets of data below has an average of \$30. If you are a comparison shopper, which store would you shop at? Why? _____

Store A				
35	0	60	50	45
30	40	80	30	30

Store B				
10	30	28	22	38
50	15	45	15	47

Store C				
28	33	40	45	80
27	25	28	28	70

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Challenging Word Problems

Solve each word problem.

1. Pam and Jane are sisters. Pam is twice as old as Jane. Together their combined age is 24. How old are Pam and Jane?

Pam is _____ years old. Jane is _____ years old.

2. The Sanford brothers are all separated by the same number of years. When added together, their combined age is 30. Maurice is three times older than the youngest brother. Ray is twice as old as the youngest brother, Mark. How old is each brother?

Maurice is _____ years old. Ray is _____ years old.
Mark is _____ years old.

3. The four Nightingale kids range in age from 1 to 8. The sum of their ages is 15. Jerry is twice as old as Fran. Brent is twice as old as Jerry. Charlotte is twice as old as Brent. How old is each one of the Nightingale kids?

Jerry is _____ years old. Brent is _____ years old.
Fran is _____ years old. Charlotte is _____ years old.

4. Steven Baxter is three times older than Keith. Bryan is $\frac{1}{3}$ younger than Steven. How old are Bryan, Keith, and Steven?

Steven is _____ years old. Keith is _____ years old.
Bryan is _____ years old.

5. Juanita is $\frac{1}{2}$ the age of her mother. Juanita's younger sister Benita is $\frac{1}{4}$ her mother's age. If their mother is 56, how old are Juanita and Benita?

Juanita is _____ years old. Benita is _____ years old.

6. The Martinez family has three children. Raphael is 5 years older than his brother Miguel. Miguel is 8 years younger than his sister Maria. If Maria is the oldest and Miguel is 7 years old, how old are Maria and Raphael?

Maria is _____ years old. Raphael is _____ years old.

7. Noriko's grandmother celebrated her 79th birthday in 2003 and her grandfather celebrated his 83rd birthday during the same year. In what year was each grandparent born?

Noriko's grandmother _____ Noriko's grandfather _____

8. Patrick and Holden are cousins and are the same age. Patrick just celebrated his 15th birthday on June 27, 2003. During the same year, Holden's birthday will be celebrated on September 17th. How many days apart were Patrick and Holden born?

Patrick and Holden were born _____ days apart.