

Data Representation Test Questions

Below are sample questions from the TIMSS achievement tests in Science administered to twenty-six countries. TIMSS is a research project sponsored by the International Association for the Evaluation of Educational Achievement (IEA). These questions may be used in the classroom, as a tool for evaluation, or to provide examples of test-question writing. The sample questions are grouped by [grades 3 and 4](#) and by [grades 7 and 8](#).



Grades 3 and 4

1. Kyle and Bob are playing a game. The object of the game is to get the highest total of points. This chart shows how many points they each scored.

Player	Kyle	Bob
Round 1	125	100
Round 2	125	125
Round 3	150	100
Round 4	50	150

Who won, and by how many points?

- A. Bob won by 25 points
- B. Bob won by 100 points
- C. Kyle won by 25 points
- D. Kyle won by 175 points

Answer: A

2. A team is selling raffle tickets. The table shows how many tickets they have sold so far.

Player's Name	Number of tickets sold
Carlos	4

Maria	7
Bill	3
Ted	7
Fay	6
Abby	9

They need to sell 60 tickets altogether. How many more tickets must they sell?

Answer: _____

Answer: 24

Grades 7 and 8

1. In a bag of cards $\frac{1}{6}$ are green, $\frac{1}{12}$ are yellow, $\frac{1}{2}$ are white and $\frac{1}{4}$ are blue. If someone takes a card from the bag without looking, which color will it most likely be?

- A. White
- B. Blue
- C. Green
- D. Yellow

Answer: A

2. A drawer contains 28 pens; some white, some blue, some red, and some gray. If the probability of selecting a blue pen is $\frac{2}{7}$, how many blue pens are in the drawer?

- A. 4
- B. 6
- C. 8
- D. 10
- E. 20

Answer: C

3. This chart shows temperature readings made at different times on four days.

	6 a.m.	9 a.m.	Noon	3 p.m.	8 p.m.
Monday	15 degrees	17 degrees	20 degrees	21 degrees	19 degrees
Tuesday	15 degrees	15 degrees	15 degrees	10 degrees	9 degrees
Wednesday	8 degrees	10 degrees	14 degrees	13 degrees	15 degrees
Thursday	8 degrees	11 degrees	14 degrees	17 degrees	20 degrees

When was the highest temperature recorded?

- A. Noon on Monday
- B. 3 p.m. on Monday
- C. Noon on Tuesday
- D. 3 p.m. on Wednesday

Answer: B

4. Each of the six faces of a certain cube is painted either red or blue. When the cube is tossed, the probability of the cube landing with a red face up is $\frac{2}{3}$. How many faces are red?

- A. One
- B. Two
- C. Three
- D. Four
- E. Five

Answer: D