Data Analysis

GRE REFRESHER

INSPIRUS®
INTERNATIONAL EDUCATION SPECIALISTS

Data Analysis

Concepts Revision

Data Analysis

1. A group of undergraduate and postgraduate students are going on a trip to an Island. Only 20% of the students remembered to bring rain ponchos. If 40% of the students are undergraduates and 25% of the undergraduates remembered to bring rain ponchos, what percentage of the students are postgraduates who forgot to bring rain ponchos?

   A. 10%
   B. 30%
   C. 50%
   D. 60%
   E. 80%

Data Analysis

2. There are 2 open seats on the country school board for the Southern District and 3 open seats for the Northwestern District. How many candidates could run from each district for there to be exactly 60 possible results for the election?

    Indicate ALL such answers.

    A. 3 candidates from the Southern District and 6 candidates from the Northwestern District
    B. 4 candidates from the Southern District and 5 candidates from the Northwestern District
    C. 5 candidates from the Southern District and 4 candidates from the Northwestern District
    D. 6 candidates from the Southern District and 4 candidates from the Northwestern District
    E. 6 candidates from the Southern District and 6 candidates from the Northwestern District
    F. 7 candidates from the Southern District and 4 candidates from the Northwestern District

Data Analysis

3. In how many different ways can be the 8 letters A, B, C, D, E, F, G and H be arranged if the letters A and B must be next to one another, the letters C and D must be next to one another, the letters E and F must be next to one another, and the letters G and H must be next to one another?
   A. 384
   B. 720
   C. 768
   D. 864
   E. 40,320

Data Analysis

4. Each of the pairs of shoes available in a store is either Reebok or Adidas. Due to the off-season 10% of the Reebok and 15% of the Adidas shoes were on sale. What percentage of the store's stock was that of Adidas shoes, if a total of 12% of the store's stock was on sale?

$$\boxed{}\ \%$$

Data Analysis

5. Every morning, Rachel walks from her house to her university. She travels exactly ten blocks from her house to the university, but she varies the route she takes every day, as shown in the figure one sample route. How many days can Rachel walk from her house to the university without repeating the same route?

HOUSE

UNIVERSITY
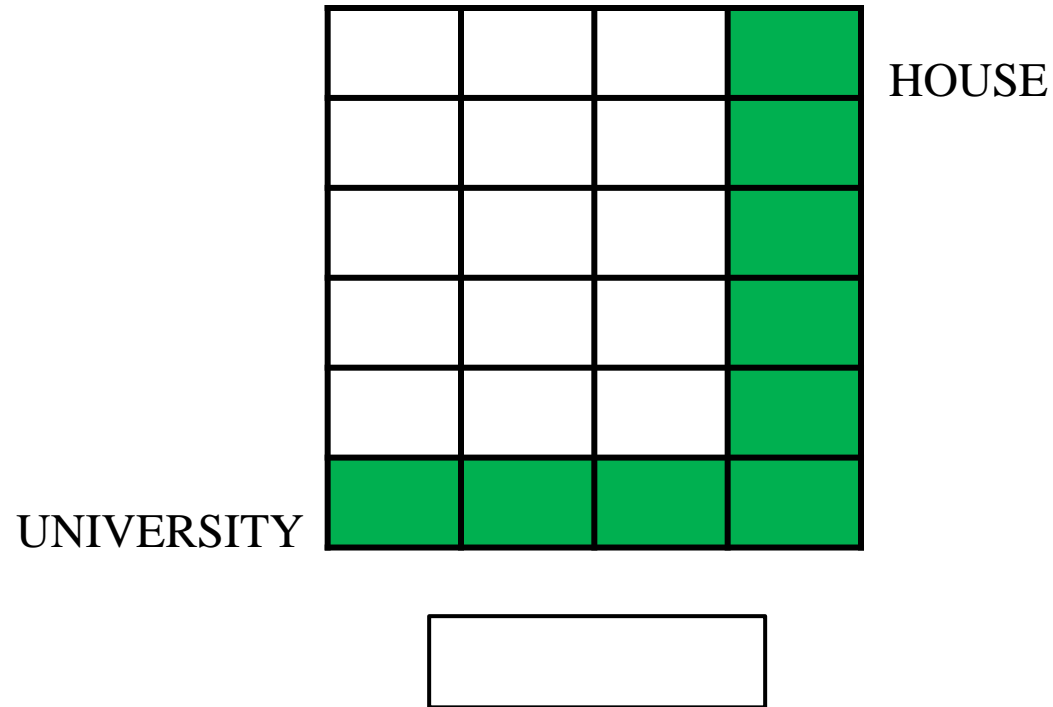
Data Analysis

6. Three kids Andy, Bucky, and Casey have five chocolate pies to share. If any one of the kids can be given any whole number of chocolate pies from 0 to 5, in how many different ways can the chocolate pies be distributed?

   A. 21
   B. 42
   C. 120
   D. 504
   E. 5040

Data Analysis

7. A fair coin with "heads" on one side and "tails" on the other is flipped 5 times.

Quantity A	**Quantity B**
The probability of getting 3 heads and in a row and then 2 tails in a row	The probability of getting 5 tails

A. Quantity A is greater
B. Quantity B is greater
C. The two quantities are equal
D. The relationship cannot be determined from the information given.

Data Analysis

8. A marble is selected at random 3 times from a bag of 2 green marbles, 2 blue marbles, and 2 red marbles. The selected marble is replaced each time. What is the probability that at least one of the selections is blue? Enter your answer as a fraction.

$$\frac{\boxed{}}{\boxed{}}$$

Data Analysis

9. A fair six-sided dice with sides labeled 1 through 6 is rolled.

Quantity A	Quantity B
The probability that the number rolled is closer to 4 than it is to 2	The probability that number rolled is closer to 5 than it is to 3

A. Quantity A is greater
B. Quantity B is greater
C. The two quantities are equal
D. The relationship cannot be determined from the information given.

Data Analysis

10. Harry, Ian, and Jimmy enter a triathlon. If there are 9 competitors in the triathlon and medals are awarded for first, second, and third place, what is the probability that at least two of them will win a medal?

   A. $\dfrac{3}{14}$

   B. $\dfrac{19}{84}$

   C. $\dfrac{11}{42}$

   D. $\dfrac{15}{28}$

   E. $\dfrac{3}{4}$

Data Analysis

11. A small, experimental plane has three engines, one of which is redundant. That is, as long as two of the engines are working, the plane will stay in the air. Over the course of a typical flight, there is a 25% chance that engine one will fail. There is a 60% probability that engine two will work. The chances of the third engine failing are 10%. What is the probability that the plane will crash in any given flight?

A. $\dfrac{27}{200}$

B. $\dfrac{29}{200}$

C. $\dfrac{41}{100}$

D. $\dfrac{58}{200}$

E. $\dfrac{81}{200}$

Data Analysis

12. A set consists of six terms: x, 30, 20, 10, 50 and 40. What must be the value of x so that the standard deviation of the six terms is minimum?

Data Analysis

13. Nancy recently won a contest in which she will have the opportunity to shoot free throws in order to win $1,000. In order to win the money, Nancy can choose to either shoot 1 free throw and make it or shoot 3 free throws and make at least 2 of them. Nancy occasionally makes shots and occasionally misses shots. She knows that her probability of making a single free throw is p, and that this probability doesn't change. Which of the following could be the possible value of p such that Nancy has a better chance of winning if she attempts 3 throws.?
Indicate ALL such values.
A. 0.00
B. 0.15
C. 0.40
D. 0.50
E. 0.60
F. 0.95
G. 1.00

Data Analysis

14. A list of numbers has a mean of 12 and a standard deviation of 3.5. If x is a number in the list that is within 2 standard deviations of the mean, what is the minimum value of x ?

GRE®

Data Analysis

15. M is a random variable that is normally distributed with a mean of 3.05 and a standard deviation of 1.72.

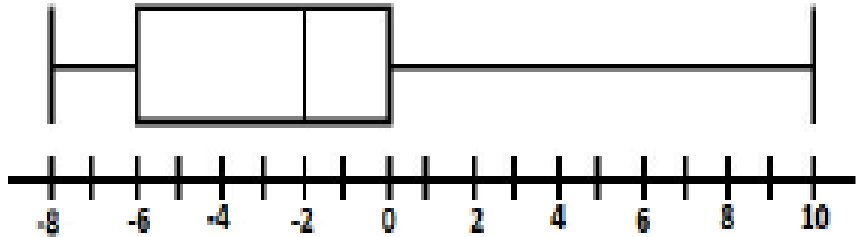| Quantity A	Quantity B
The probability that $1 < M < 2$	The probability that $4 < M < 5$

A. Quantity A is greater
B. Quantity B is greater
C. The two quantities are equal
D. The relationship cannot be determined from the information given.
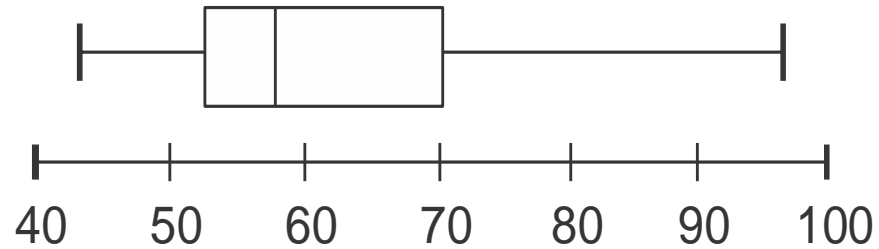
GRE.

Data Analysis

16. Which of the following sets of data applies to this graph?

   A. -8, -8, -4, 0, 0, 10
   B. -8, 2, 2, 6, 8, 8
   C. -8, -8, -6, 2, 10
   D. -10, -6, 8, 10
   E. -8, -8, -4, -4, 0, 0, 0, 10

GRE®

Data Analysis

17. A class comprising of 100 students was weighed, and the resulting measurements, in kilograms, are summarized in the boxplot below.
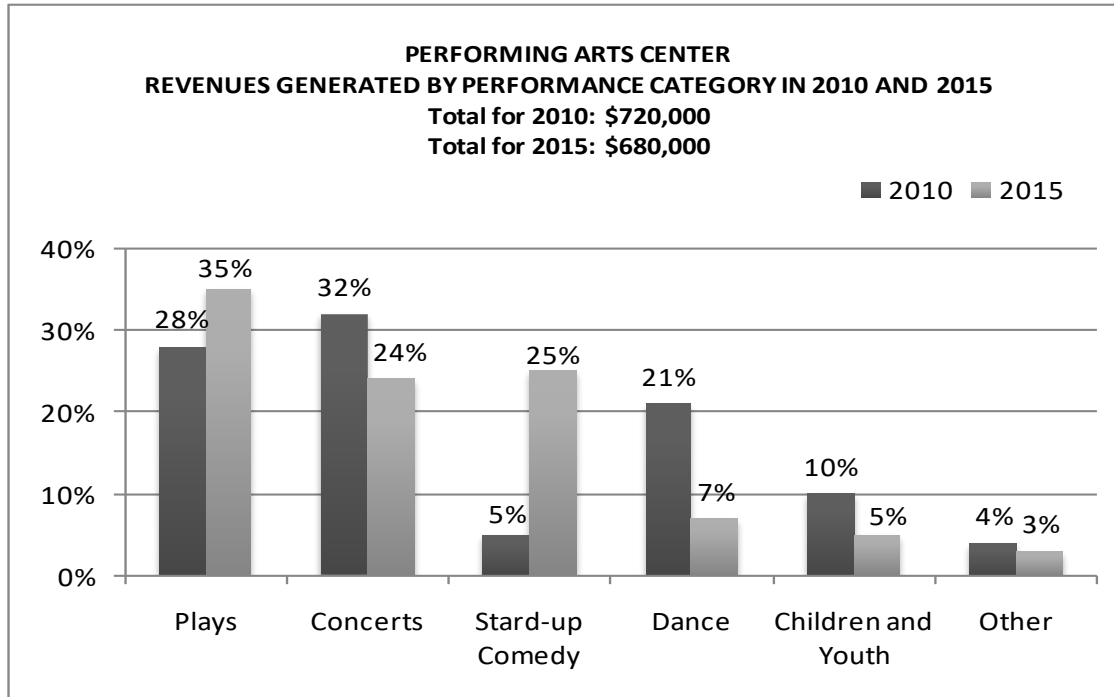

If the 80th percentile of the measurements is 74 kilograms, about how many measurements are between 70 kilograms and 74 kilograms?

Data Analysis

18. 20 participants are competing in a race. The time taken by each participant is plotted on box and whisker plot and one of the participants, Lee, finishes third in the second quartile. If four more participants competed in the race along with the previous 20 participants and they were the first four to finish the race, what is Lee's position with respect to the 24 participants?
    A. The third in second quartile.
    B. The last in second quartile.
    C. The first in second quartile.
    D. The first in third quartile.
    E. The second-last in second quartile.

Data Analysis

19. The graph shows the revenue of Performance Art center for the year 2010-2015

PERFORMING ARTS CENTER
REVENUES GENERATED BY PERFORMANCE CATEGORY IN 2010 AND 2015
Total for 2010: $720,000
Total for 2015: $680,000

■ 2010 ■ 2015

Plays: 28% (2010), 35% (2015)
Concerts: 32% (2010), 24% (2015)
Stand-up Comedy: 5% (2010), 25% (2015)
Dance: 21% (2010), 7% (2015)
Children and Youth: 10% (2010), 5% (2015)
Other: 4% (2010), 3% (2015)

Two performance categories saw increases in revenue from 2010 to 2015. What was their combined revenue, in dollars, in 2010?

Data Analysis

The following table lists numbers of college graduates, broken down by major, gender and employment status:

Major	Males (in thousands)	Females (in thousands)	Employed in Field (in thousands)	Employed in another field (in thousands)
Science	512.8	647.2	212.4	568.6
Computer Science	126.7	37.3	95.2	45.3
Math	23.6	20.4	5.9	23.5
Psychology	58	194.7	18.4	144.4
Engineering	143.6	39.4	117.2	28

20. According to the data in the table, approximately what percent of engineering graduates are unemployed?

A. 15.3%

B. 20.7%

C. 23.9%

D. 37.8%

E. 64.0%

GRE®

IN

Data Analysis

The following table lists numbers of college graduates, broken down by major, gender and employment status:

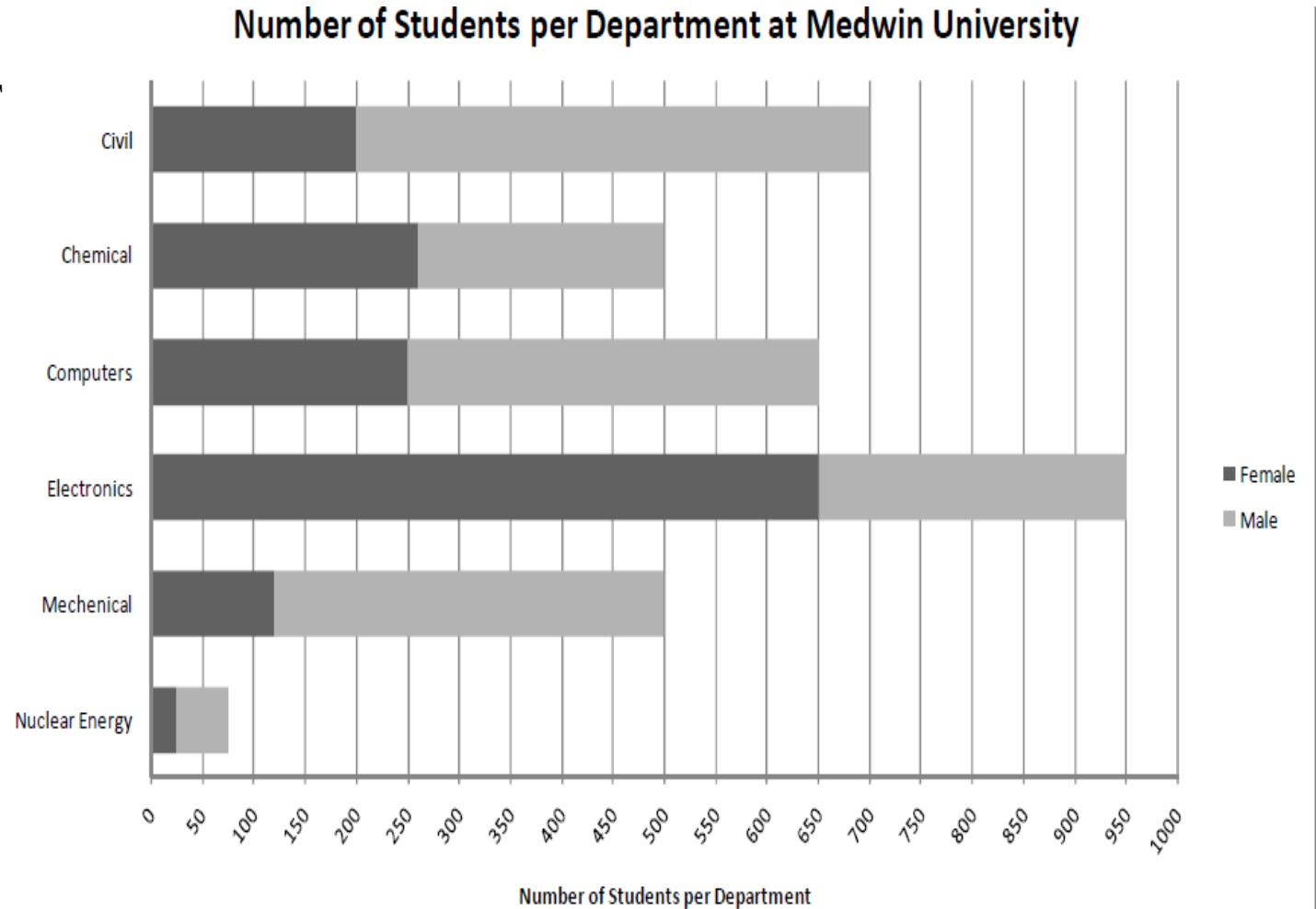| Major	Males (in thousands)	Females (in thousands)	Employed in Field (in thousands)	Employed in another field (in thousands)
Science	512.8	647.2	212.4	568.6
Computer Science	126.7	37.3	95.2	45.3
Math	23.6	20.4	5.9	23.5
Psychology	58	194.7	18.4	144.4
Engineering	143.6	39.4	117.2	28

21. If women account for 40% of the science graduates employed in their field, as well as for 40% of the science graduates employed outside their field, what is the approximate ratio among science graduates of women employed in their field to men employed outside their field?

A. 1:4

B. 7:25

C. 1:2

D. 4:25

E. 2:3

GRE®

Data Analysis

22. Each student belong to only one of the departments at Medwin University EXCEPT those who enrolled for a dual degree program in both mechanical and civil engineering. If there are a total of 1850 male students at Medwin University, approximately how many male students are enrolled on both mechanical and civil engineering dual degree program?

A. 0
B. 25
C. 75
D. 125
E. Cannot be determined

Number of Students per Department at Medwin University

Thank you