
**Vendor:**PCAT

**Exam Code:**PCAT-SECTION3

**Exam Name:**Pharmacy College Admission Test - Quantitative

**Version:**Demo

**QUESTION 1**

Chemistry students performed nine volume measurements of a solution during a lab and obtained the

following results:

{2.4mL, 3.2mL, 3.7mL, 3.7mL, 4.5mL, 6.8mL, 7.3mL, 8.1mL, 12.2mL}

What is the mode of the data set?

A. 3.7mL

B. 4.5mL

C. 5.8mL

D. 9.8mL

Correct Answer: A

The mode is the measurement that is the most frequent or common value in the data set. In this example, the mode is 3.7mL, because it occurs twice, more than any of the other measurements that occur only once.

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**QUESTION 2**

If and x/y = 8 and x=64, then what is the sum x + y?

A. 56

B. 64

C. 72

D. 81

Correct Answer: C

From the first equation, multiply both sides byyresulting in x= 8y.

Becausex= 64, you can write

64 = 8y

Y=8

Substituting the given information regardingxandyinto its sum yields:

x+y= 64 + 8 = 72.

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**QUESTION 3**

What is the median of the data set?

A. 80

B. 83

C. 85

D. 86

Correct Answer: B

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**QUESTION 4**

What is the probability of selecting a face card of a spade suit from two standard decks of cards?

A. 3/52

B. 6/52

C. 6/104

D. 46/104

Correct Answer: C

You are asked to determine the probability of randomly selecting one face card (king, queen, or jack) of a spade suit from two standard decks of cards. Because there are two decks of cards, a single card can be selected from two decks inn= 104 different ways. Since there are 3 face cards of a spade suit in one deck of cards, such a card can be drawn from the two decks ins= 6 different ways. Thus, the probability that the selected card is a face card of a spade suit is:p=s/n= 6/104

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**QUESTION 5**

What is the average of the numbers 24, 53, 70, 89, 34, and 30?

A. 84

B. 39

C. 71

D. 50

Correct Answer: D

The average of a set of numbers is calculated by:

$$Avg = \frac{24+53+70+89+34+30}{6} = \frac{300}{6} = 50.$$

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**QUESTION 6**

$$(4a^2b^4c) \times (-7a^5b^3) =$$

**A.** $-11a^7b^7c$ **B.** $-28a^7b^7c$ **C.** $28a^7b^7c$ **D.** $a^7b^7c$

A. Option A

B. Option B

C. Option C

D. Option D

Correct Answer: B

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**QUESTION 7**

Evaluate the following indefinite integral:

$$\int 10t^4 dt$$

**A.** $2t^5 + C$ **B.** $10t^5 + C$ **C.** $\frac{2}{5}t^5 + C$ **D.** $\frac{10}{3}t^5 + C$

A. Option A

B. Option B

C. Option C

D. Option D

Correct Answer: A

Evaluatingthese integral yields:

$$\int 10t^4 dt = \frac{10}{5}t^5 = 2t^5 + C.$$

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**QUESTION 8**

Evaluate the following derivative: A. Option A

$$\frac{d}{dx}\left(\frac{15}{3x^8}\right)$$

A. $-\frac{40}{x^9}$ B. $\frac{40}{x^9}$ C. $-\frac{40}{x^{-9}}$ D. $\frac{40}{x^{-9}}$

B. Option B

C. Option C

D. Option D

Correct Answer: A

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**QUESTION 9**

On a single roll of a die, what is the probability of not getting a 2?

A. 1/6

B. 3/6

C. 4/6

D. 5/6

Correct Answer: D

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**QUESTION 10**

What is the solution of the inequality 3x9>12x?

A. $x>\frac{1}{2}$ B. $x<\frac{1}{2}$ C. $x>2$ D. $x<2$

A. Option A

B. Option B

C. Option C

D. Option D

Correct Answer: C

To solve the inequality 3x 9 > 1 2x, you need to collect like terms ofxon one side of the inequality and all other values to the other side. You first add 9 to both sides of the inequality:

$$3x-9+9>1-2x+9$$

$$3x>10-2x.$$

You then add 2xto both sides of the inequality:

$$3x+2x>10-2x+2x$$

$$5x>10.$$

Dividing both sides by 5 yieldsx> 2.

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**QUESTION 11**

Express 239 in scientific notation.

A. $2.39\times10^{0}$ B. $2.39\times10^{1}$ C. $2.39\times10^{2}$ D. $2.39\times10^{3}$

A. Option A

B. Option B

C. Option C

D. Option D

Correct Answer: C

The number 239 is expressed in scientific notation by first expressing the value in terms of a real number such that 1 a

2.39 × 100 = 2.39 × 102.

**QUESTION 12**

What is the probability of randomly selecting a ten card from a standard deck of cards?

A. 1/52

B. 1/13

C. 12/13

D. 51/12

Correct Answer: B

To determine the probability that a selected card is a ten, you should first note that a card can be selected from a deck inn= 52 different ways. Since there are four ten cards, one ten for each of the four suits, a ten can be drawn from the deck ins= 4 different ways. Thus, the probability that the selected card is a ten is:

$$p = \frac{s}{n} = \frac{4}{52} = \frac{1}{13}.$$