Arithmetic Accuplacer Practice Test (Sample)

Study Guide

Everything you need from our exam experts!

Questions

1. **If Jim increases his daily distance to 15 km, how much total distance would he run in 8 days?**

   A. 100 km

   B. 110 km

   C. 120 km

   D. 130 km

2. **What is the interest earned on Jason's investment of $325 at an annual interest rate of 24% after one year?**

   A. $78

   B. $65

   C. $80

   D. $100

3. **What is 270 divided by 9?**

   A. 30

   B. 27

   C. 33

   D. 24

4. **What is the approximate value of 204.38 rounded to the nearest integer?**

   A. 203

   B. 204

   C. 205

   D. 206

5. **What is 14 multiplied by 3?**

   A. 36

   B. 39

   C. 42

   D. 44

6. What is 25 + 18?

A. 40

B. 42

C. 43

D. 45

7. What is the sum of 100, 50, and 25?

A. 150

B. 175

C. 200

D. 225

8. If a rectangle has a length of 10 and a width of 5, what is its area?

A. 30

B. 40

C. 50

D. 60

9. If a book costs $15 and David bought 50 copybooks, what is the total cost if he purchased an additional 5 books?

A. $82.50

B. $85.00

C. $87.50

D. $90.00

10. Multiply 14 by 3.

A. 36

B. 40

C. 42

D. 44

Answers

1. C
2. A
3. A
4. C
5. C
6. C
7. B
8. C
9. B
10. C

Explanations

1. If Jim increases his daily distance to 15 km, how much total distance would he run in 8 days?

A. 100 km

B. 110 km

C. 120 km

D. 130 km

To find the total distance that Jim would run in 8 days after increasing his daily distance to 15 km, you multiply the daily distance by the number of days he runs. The calculation is straightforward: 15 km/day × 8 days = 120 km. This means that if Jim runs 15 kilometers each day for 8 days, his total distance covered will be 120 kilometers. This correctly reflects the increase in his daily distance and provides the total for the specified duration. Thus, the answer of 120 km is accurate as it represents the product of his daily distance and the number of days ran.

2. What is the interest earned on Jason's investment of $325 at an annual interest rate of 24% after one year?

A. $78

B. $65

C. $80

D. $100

To calculate the interest earned on Jason's investment of $325 at an annual interest rate of 24% after one year, you can use the formula for simple interest, which is: Interest = Principal × Rate × Time. In this case: - Principal (the initial amount) is $325, - Rate (the annual interest rate) is 24%, or 0.24 in decimal form, - Time is 1 year. Plugging the values into the formula: Interest = $325 × 0.24 × 1. Calculating this gives: Interest = $325 × 0.24 = $78. Thus, after one year, Jason earns $78 in interest on his investment. This illustrates the straightforward relationship between the principal, the interest rate expressed as a decimal, and the time period, resulting in a clear understanding of how to compute simple interest.

3. What is 270 divided by 9?

A. 30

B. 27

C. 33

D. 24

To understand why 30 is the correct answer for 270 divided by 9, we can approach the division step by step. When you divide 270 by 9, you are essentially figuring out how many times 9 can fit into 270. One way to perform this division is to use multiplication to check your work. If you multiply the result, which is 30, by the divisor, 9, you should arrive back at the original number, 270. 30 multiplied by 9 equals 270, which confirms that 30 is indeed the correct quotient for the division. This means that when you split 270 into groups of 9, you will have exactly 30 groups. It's also helpful to note that dividing larger numbers can be simplified by breaking them down. In this case, knowing that 9 is a factor of 270 helps in making the division clearer. This way of understanding division not only provides the answer but also reinforces the relationship between multiplication and division.

4. What is the approximate value of 204.38 rounded to the nearest integer?

A. 203

B. 204

C. 205

D. 206

When rounding a number to the nearest integer, the digit immediately to the right of the decimal point plays a critical role in determining how to round. In the case of 204.38, we focus on the first digit after the decimal, which is 3. According to rounding rules, if this digit is 5 or higher, we round up. If it is less than 5, we round down. Since the digit is 3, which is less than 5, we round down the number 204.38 to 204. Therefore, the approximate value of 204.38 rounded to the nearest integer is 204. This understanding of rounding rules is necessary for determining approximate values in various mathematical contexts.

5. What is 14 multiplied by 3?

A. 36

B. 39

C. 42

D. 44

To find the product of 14 and 3, we perform the multiplication straightforwardly. Multiplication can be understood as repeated addition. In this case, multiplying 14 by 3 means adding 14 three times: 14 + 14 + 14. Calculating this step-by-step: 1. First, add the first two 14s together: 14 + 14 = 28. 2. Then, add the next 14 to this result: 28 + 14 = 42. Thus, 14 multiplied by 3 equals 42. This confirms that the answer is correct, solidifying the understanding of multiplication as an extension of addition. This method ensures clarity in how multiplication operates in basic arithmetic.

6. What is 25 + 18?

A. 40

B. 42

C. 43

D. 45

To find the sum of 25 and 18, you can add the two numbers together directly. Start by breaking down the addition as follows: 1. Add the tens: The number 25 consists of 20 (2 tens) and 5 (units), while 18 consists of 10 (1 ten) and 8 (units). When you add the tens, 20 + 10 equals 30. 2. Next, add the units: 5 + 8 equals 13. 3. Now combine the results: Take the 30 from the tens and add 13 from the units. So, 30 + 13 equals 43. The sum of 25 and 18 is indeed 43, making it the correct answer. This process of breaking down the addition into parts can help you visualize and confirm your calculations more clearly.

7. What is the sum of 100, 50, and 25?

A. 150

B. 175

C. 200

D. 225

To find the sum of 100, 50, and 25, you begin by adding the first two numbers together. When you add 100 and 50, you get 150. Then, take that result and add the last number, which is 25. So, you perform the addition like this: 100 + 50 = 150 150 + 25 = 175 Therefore, the total sum of 100, 50, and 25 is 175. This confirms that the correct answer is indeed 175. When calculating sums, it's important to ensure each step is clear and careful to avoid errors, especially with larger numbers or multiple figures.

8. If a rectangle has a length of 10 and a width of 5, what is its area?

A. 30

B. 40

C. 50

D. 60

To find the area of a rectangle, you use the formula: Area = Length × Width. In this case, the length of the rectangle is given as 10, and the width is given as 5. Plugging these values into the formula gives: Area = 10 × 5 = 50. Thus, the area is 50 square units. This result aligns with option C, which is the correct answer. Other options do not accurately represent the calculated area based on the dimensions provided.

9. If a book costs $15 and David bought 50 copybooks, what is the total cost if he purchased an additional 5 books?

A. $82.50

B. $85.00

C. $87.50

D. $90.00

To determine the total cost of David's purchase, you first need to calculate the cost of the initial purchase of the 50 copybooks, followed by the cost of the additional 5 books. 1. The cost of one book is $15. Therefore, the total cost for 50 copybooks is calculated as follows: $$ 50 \text{ copybooks} \times 15 \text{ dollars per copybook} = 750 \text{ dollars}. $$ 2. Next, calculate the cost for the additional 5 books: $$ 5 \text{ books} \times 15 \text{ dollars per book} = 75 \text{ dollars}. $$ 3. Finally, add the total cost of the copybooks and the additional books together: $$ 750 \text{ dollars} + 75 \text{ dollars} = 825 \text{ dollars}. $$ Upon reviewing the calculations, it appears there was an error in interpreting the totals provided in the answer options, as the addition is not matching the expected range. The correct total amount for the multiple purchases, when correctly calculated iteratively, should indeed give a final aggregated cost of $825, which does not adhere to the options

10. Multiply 14 by 3.

A. 36

B. 40

C. 42

D. 44

To find the product of 14 and 3, you need to perform the multiplication operation. Multiplication can be understood as repeated addition, where you add the number 14 to itself three times. So, you can calculate it as follows: - \(14 + 14 + 14 \) This can be simplified step-by-step: - First, add the first two 14s: - \(14 + 14 = 28 \) - Then, add the last 14 to that sum: - \(28 + 14 = 42 \) Therefore, the product of 14 multiplied by 3 is indeed 42. This confirms that the correct answer is the choice that states 42 as the result. This value accurately represents the total when 14 is repeated three times in the context of multiplication.