Workkeys Math Practice Test (Sample)

Study Guide

Everything you need from our exam experts!

Questions

1. **If a recipe requires 2 cups of flour and you want to make half, how much flour do you need?**
   - **A. 0.5 cups**
   - **B. 1 cup**
   - **C. 1.5 cups**
   - **D. 2 cups**

2. **If you have a speed of 30 miles per hour, how far can you travel in 2.5 hours?**
   - **A. 60 miles**
   - **B. 75 miles**
   - **C. 90 miles**
   - **D. 100 miles**

3. **What is the result of 144 divided by 12?**
   - **A. 10**
   - **B. 12**
   - **C. 14**
   - **D. 16**

4. **Normally, how long does it take to assemble one flower arrangement if it takes 20 hours for 10 arrangements?**
   - **A. 1 hour**
   - **B. 2 hours**
   - **C. 3 hours**
   - **D. 4 hours**

5. **If you score 18 out of 20 on a test, what is your percentage score?**
   - **A. 85%**
   - **B. 90%**
   - **C. 95%**
   - **D. 80%**

6. Which of the following represents natural numbers?

A. 0, 1, 2, 3

B. 1, 2, 3, 4

C. -1, 0, 1, 2

D. All integers

7. Solve for x: If 2x + 5 = 13, what is x?

A. x = 3

B. x = 4

C. x = 5

D. x = 6

8. At a city water purification plant, how many ounces of release agent should be mixed with 32 ounces of water if the ratio is 8:1?

A. 3 ounces

B. 4 ounces

C. 5 ounces

D. 6 ounces

9. If a car travels at a speed of 60 km/h, how far will it travel in 2 hours?

A. 90 km

B. 100 km

C. 120 km

D. 150 km

10. How much is 3/5 + 1/5?

A. 3/5

B. 4/5

C. 2/5

D. 1/5

Answers

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

Explanations

1. If a recipe requires 2 cups of flour and you want to make half, how much flour do you need?

A. 0.5 cups

B. 1 cup

C. 1.5 cups

D. 2 cups

To determine how much flour is needed when making half of a recipe that requires 2 cups of flour, you divide the total amount of flour by 2. Starting with the recipe's requirement of 2 cups, you perform the calculation: \[\frac{2 \text{ cups}}{2} = 1 \text{ cup} \] Thus, if you are making half of the recipe, you need 1 cup of flour. This aligns with the correct answer. The calculation clearly illustrates how halving the amount of flour from the original recipe leads to the necessity of using 1 cup, which is the correct and logical approach to adjusting recipe quantities.

2. If you have a speed of 30 miles per hour, how far can you travel in 2.5 hours?

A. 60 miles

B. 75 miles

C. 90 miles

D. 100 miles

To determine the distance traveled, you can use the formula for distance, which is: Distance = Speed × Time In this problem, the speed is 30 miles per hour, and the time given is 2.5 hours. Now you can perform the calculation: Distance = 30 miles/hour × 2.5 hours Breaking it down further: 30 miles/hour × 2.5 hours = 30 × 2.5 = 75 miles This shows that if you maintain a speed of 30 miles per hour for 2.5 hours, you will indeed cover a total distance of 75 miles. This calculation follows the basic principles of unit conversion and multiplication, highlighting how distance, speed, and time are related. The other options do not match this calculation and represent distances that would be incorrect if calculated with the provided speed and time. Thus, the answer of 75 miles is the correct one based on this fundamental principle.

3. What is the result of 144 divided by 12?

A. 10

B. 12

C. 14

D. 16

The result of dividing 144 by 12 can be determined through straightforward division. When you divide 144 by 12, you are essentially asking how many times 12 fits into 144. By performing the division, you find that 12 goes into 144 exactly 12 times, which yields a quotient of 12. To visualize this, you can think of it as determining how much each group of 12 amounts to when combined to reach 144. If you group 144 into segments of 12, you will have 12 complete groups. This reinforces that the division operation is correctly performed and illustrates the concept of division as repeated subtraction or grouping. Thus, the answer of 12 represents a complete and accurate depiction of the division task in question.

4. Normally, how long does it take to assemble one flower arrangement if it takes 20 hours for 10 arrangements?

A. 1 hour

B. 2 hours

C. 3 hours

D. 4 hours

To determine how long it takes to assemble one flower arrangement, we can start by finding the time it takes to create each individual arrangement based on the total time for multiple arrangements. Given that it takes

5. If you score 18 out of 20 on a test, what is your percentage score?

A. 85%

B. 90%

C. 95%

D. 80%

To determine the percentage score based on a test score, you need to divide the number of correct answers by the total number of questions on the test and then multiply by 100 to convert it into a percentage format. In this case, the calculation is as follows: 1. Take the number of correct answers, which is 18. 2. Divide this number by the total number of questions, which is 20. - This gives you 18 ÷ 20 = 0.9. 3. To convert this decimal into a percentage, multiply by 100. - So, 0.9 × 100 = 90%. Thus, scoring 18 out of 20 results in a percentage score of 90%. This demonstrates how to compute a percentage from a fraction by applying division and multiplication, ensuring a clear understanding of the relationship between correct responses and total possible responses.

6. Which of the following represents natural numbers?

A. 0, 1, 2, 3

B. 1, 2, 3, 4

C. -1, 0, 1, 2

D. All integers

Natural numbers are defined as the set of positive integers used for counting and ordering. The sequence typically starts from 1 and extends infinitely (1, 2, 3, ...). The option that features 1, 2, 3, and 4 accurately embodies this definition. These values are all positive whole numbers and fit perfectly within the criteria for natural numbers. This answer excludes any negative numbers, fractions, or zero, which do not belong to the set of natural numbers. In contrast, other options either include zero, which is traditionally not considered a natural number, or contain negative integers, which fall outside the realm of natural numbers. Thus, the representation of natural numbers is best captured in the choice that starts from 1 and includes only positive integers.

7. Solve for x: If 2x + 5 = 13, what is x?

A. x = 3

B. x = 4

C. x = 5

D. x = 6

To solve the equation 2x + 5 = 13, the goal is to isolate the variable x. First, subtract 5 from both sides of the equation to eliminate the constant term on the left side. This gives: 2x + 5 - 5 = 13 - 5, simplifying to: 2x = 8. Next, to solve for x, divide both sides of the equation by 2, resulting in: x = 8 / 2, which simplifies to: x = 4. Therefore, x equals 4, making this result the correct answer. This value can be verified by substituting it back into the original equation. When x = 4 is substituted into 2x + 5, the equation becomes 2(4) + 5, which equals 8 + 5, resulting in 13, confirming that the solution is indeed correct.

8. At a city water purification plant, how many ounces of release agent should be mixed with 32 ounces of water if the ratio is 8:1?

A. 3 ounces

B. 4 ounces

C. 5 ounces

D. 6 ounces

To determine how many ounces of release agent should be mixed with 32 ounces of water using the ratio of 8:1, we first need to understand what this ratio signifies. In a ratio of 8:1, for every 8 parts of the first substance (in this case, the release agent), there is 1 part of the second substance (water). Since the amount of water is given as 32 ounces, we can set up a proportion based on the ratio. The total number of parts in the ratio is 8 (for the release agent) + 1 (for the water) = 9 parts. Now, each part corresponds to: \[\text{Total amount of water} = 32 \text{ ounces} \] We calculate the amount represented by each part: \[\text{Each part} = \frac{32 \text{ ounces}}{1} = 32 \text{ ounces of water} \] Now, since we know there are 8 parts of release agent, the total amount of release agent needed is: \[\text{Release agent} = 8 \times \frac{32}{1} = 8 \text{ parts} \]

9. If a car travels at a speed of 60 km/h, how far will it travel in 2 hours?

A. 90 km

B. 100 km

C. 120 km

D. 150 km

To find out how far a car travels, you can use the formula for distance, which is Distance = Speed × Time. In this scenario, the car's speed is given as 60 kilometers per hour (km/h), and it travels for 2 hours. Applying the formula: Distance = 60 km/h × 2 hours = 120 km. Therefore, the car will travel a distance of 120 kilometers in 2 hours. This calculation shows a clear understanding of how speed and time interact to determine distance, reinforcing the importance of being familiar with basic formulas in solving such problems.

10. How much is 3/5 + 1/5?

A. 3/5

B. 4/5

C. 2/5

D. 1/5

To solve the problem of adding the fractions 3/5 and 1/5, you first need to recognize that both fractions share a common denominator, which in this case is 5. When adding fractions with the same denominator, you simply add the numerators while keeping the denominator the same. So, you take the numerators: 3 and 1, and add them together. This results in: 3 + 1 = 4. Next, you keep the denominator, which is 5, the same. Therefore, you combine the results to get: 4/5. This confirms that the correct answer is 4/5. It represents the total value obtained by combining the two fractional parts. Understanding how to add fractions through this process is fundamental in arithmetic, particularly when dealing with fractions that share the same denominator.