California Basic Educational Skills Test - Quiz Questions with Answers

Mathematics (096): Computation & Problem Solving

1.

3/4 is how many times greater than 1/2?

- **1.5**
- 1.25
- 1.75
- 2
- 2.25

Correct answer: 1.5

The mathematical expression would be:

*3/4 ÷ 1/2 = 3/4 * 2/1 = 6/4 = 1.5*

2.

If 3n - 3 > 33, which of the following must be **true**?

n > 12

n > 36

n > 24

n > 8

n < 8

Correct answer: n > 12

Add 3 to both sides of the equation: 3n > 36

Divide both sides of the equation by 3: n > 12

3.

Every 5 minutes, someone is diagnosed with lung cancer. How many people are diagnosed with lung cancer in 1,440 minutes?

288

1,440

720

100

144

Correct answer: 288

In order to find out how many people are diagnosed with lung cancer in a 1,440-minute period, you need to divide:

1,440/5 = 288

4.

What is the sum of 23 1/2, 11 1/8, and 26 1/4?

60 7/8

60 5/8

34 1/2

45 1/4

60 3/8

Correct answer: 60 7/8

Add the three fractional amounts together. In order to get the same denominator for each fraction, change 1/2 to 4/8, and 1/4 to 2/8.

Then, add the numbers. The result is 60 7/8.

23 4/8 + 11 1/8 + 26 2/8 = 60 7/8

5.

If 7q - 63 > -2q, which of the following must be **true**?

7 < q

9 < q

-7 > q

9 > q

1/7 > q

Correct answer: 7 < q

Subtract 7q from both sides of the equation: -63 > -9q

Divide both sides of the equation by -9: 7 < q

Remember that the sign reverses direction when multiplying or dividing by a negative number.

6.

Each of the 50 judges is asked to select one and only one robe to wear. There are 25 grey robes available and 25 black robes available. At this instant, 35 of the total robes have been selected.

Which of the following facts can be determined from the information given above?

The total number of judges in the group that have not yet chosen a robe

The number of judges that selected a grey robe

The number of male judges who selected a black robe

The total number of judges in the United States

The ratio of male judges to female judges who chose a black robe

Correct answer: The total number of judges in the group that have not yet chosen a robe

You will want to eliminate the answer choices you know are wrong and focus on the information you are given. You know that 35 of the robes have been selected, and that there are a total of 50 judges who are selecting a robe. Therefore, you can determine the number of judges who have not yet chosen a robe.

7.

In 1988, a school lunch cost $0.80. In 2011, a school lunch cost $2.00. What was the percent increase in the cost of school lunches?

150%

50%

75%

120%

100%
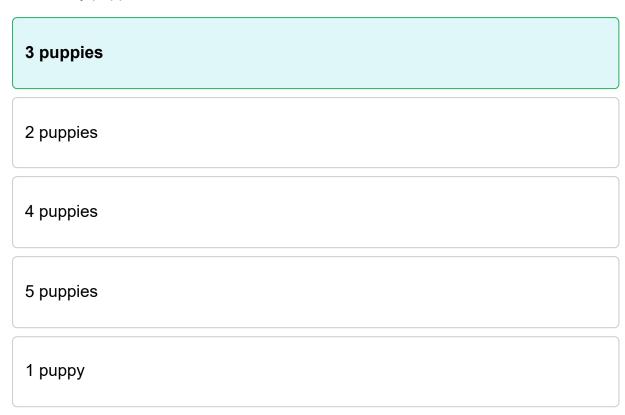
Correct answer: 150%

This is a percent increase problem. Use the formula for percent change: difference / original.

The difference between the two amounts is $1.20, and the original amount is $0.80.

$1.20 / $0.80 = 1.5, which is 150%.

8.

Duchess, the female Labrador, had a litter of 11 puppies. When the puppies turned 6 weeks old, 2 of the puppies were adopted; at 8 weeks old, 2 more puppies were adopted; and at 10 weeks old, 4 puppies were adopted.

How many puppies does Duchess still have?

3 puppies

2 puppies

4 puppies

5 puppies

1 puppy

Correct answer: 3 puppies

You will need to subtract the total number of puppies that were adopted from the initial number of puppies.

11 - 2 - 2 - 4 = 3

9.

What is the sum of 10 1/3, -9 2/9, and 5 2/3?

6 7/9

7 2/9

25 2/9

24 7/9

25 7/9

Correct answer: 6 7/9

Add the three fractional amounts. In order to get the same denominator for each fraction, change 1/3 to 3/9 and 2/3 to 6/9.

Then, add the numbers, remembering that 9 2/9 is negative. The result is 6 7/9.

10 3/9 - 9 2/9 + 5 6/9 = 6 7/9

10.

65 less than 2 times a number is 53. What is the number?

59

-6

28

89

236

Correct answer: 59

The algebraic equation is 2x - 65 = 53.

To solve the equation, add 65 to both sides of the equation, giving you 2x = 118. Then, divide both sides by 2 to get x = 59.

11.

Donna, Debbie, and Sally are at the Café Court in the mall. They consumed a total of 9 tacos, 3 brownies, and 3 iced teas. Donna ate more tacos than Sally. Debbie ate 2 tacos and 1 brownie. Brownies cost $1.00 more than tacos, but less than iced tea.

Which of the following statements can be determined from the above information?

Who ate the most tacos

How many tacos Sally ate

The total cost of all the tacos

The cost of iced tea

Correct answer: Who ate the most tacos

This can be determined from the information provided. You know that they ate 9 tacos. Debbie ate two tacos, which means that 7 tacos were consumed by Donna and Sally. The problem states that Donna ate more tacos than Sally. While you do not know exactly how many tacos Donna ate, you know that Donna had the most, because Donna would have either consumed 4, 5, or 6 tacos, to have consumed more than Sally.

12.

Clyde and James both own fast-food franchises. There are a total of 1,200 franchises between them. If James owns 65% of the fast-food franchises, how many franchises does Clyde own?
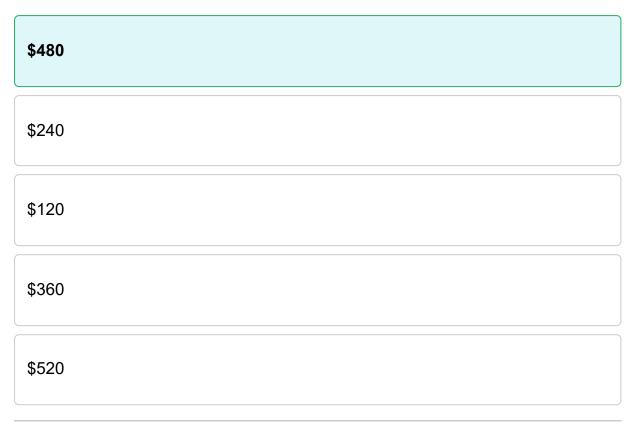
420

480

500

600

780

Correct answer: 420

You know that James owns 65% of the franchises, so that would leave Clyde owning 35% of the franchises.

To get the total number of franchises that Clyde owns, multiply 0.35 by 1,200, to get 420.

13.

Darin earns $1,200.00 every Friday. He saves 40% of his earnings for his house payment and 20% for his vehicle payment. The remaining percentage he uses for his living expenses. How much money does Darin have every Friday to use for his living expenses?

$480

$240

$120

$360

$520

Correct answer: $480

First, you need to determine what percentage Darin uses for his living expenses: 100% - 40% - 20% = 40%.

*Then, you need to calculate the percentage: 40/100 * $1,200 = $480.*

14.

Two babies were born on Tuesday. The first baby weighed 6 1/4 pounds, and the second baby weighed 7 3/8 pounds. What was the total weight of the two babies born on Tuesday?

13 5/8 pounds

13 1/8 pounds

42 1/3 pounds

42 5/8 pounds

15 1/4 pounds

Correct answer: 13 5/8 pounds

Add the two fractional amounts together. In order to get the same denominator for each fraction, change 1/4 to 2/8.

Then, add the numbers. The result is 13 5/8 pounds.

6 2/8 + 7 3/8 = 13 5/8

15.

There are 50 guests at the party and each guest gets to pick one and only one dinner plate. There are 18 beef dinner plates, 18 chicken dinner plates, and 14 turkey dinner plates. At this very instant, 32 of the total dinner plates have been chosen.

Which of the following facts can be determined from the information above?

The number of guests in the group that have not yet chosen a dinner plate

The number of guests that have chosen a turkey dinner plate

The number of female guests who selected a chicken dinner plate

The total number of guests who were invited to the party

The ratio of males to females at the party

Correct answer: The number of guests in the group that have not yet chosen a dinner plate

You will want to eliminate the answer choices you know are wrong and focus on the information you are given. You know that 32 of the dinner plates have been chosen, and that there are a total of 50 guests who are at the party picking dinner plates. Therefore, you can determine how many guests have not yet chosen a dinner plate.

16.

Each of the 28 club members is asked to select one and only one item to start recycling. There are 10 spaces available for plastic recycling, 10 spaces available for aluminum recycling, and 8 spaces available for paper recycling. As of 6:30 p.m., 22 of the total recycling spaces have been filled.

Which of the following facts can be determined from the information given above?

The total number of recycling spaces that have not yet been filled

The number of members that have chosen plastic recycling

The number of males who selected paper recycling

The total number of recycling spaces that were selected by 6:20 p.m.

The ratio of males to females that selected paper recycling

Correct answer: The total number of recycling spaces that have not yet been filled

You will want to eliminate the answer choices you know are wrong and focus on the information you are given. You know that 22 recycling spaces have been filled, and that there are a total of 28 club members and 28 recycling spaces available. Therefore, you can determine how many recycling spaces have not been filled.

17.

Two men joined the military. The first man's height was 72 1/2 inches, and the second man's height was 68 1/6 inches. What was the total height of the two men who joined the military?

140 2/3 inches

140 1/3 inches

72 2/3 inches

68 1/2 inches

138 2/3 inches

Correct answer: 140 2/3 inches

Add the two fractional amounts together. In order to get the same denominator for each fraction, change 1/2 to 3/6.

Then, add the numbers. The result is 140 2/3 inches.

72 3/6 + 68 1/6 = 140 4/6

140 4/6 = 140 2/3

18.

What does n equal if -4n = 2n - 12?

2

6

-2

3

-1

Correct answer: 2

First, subtract 2n from each side of the equation: -6n = -12

Now, divide each side of the equation by -6: n = 2

19.

Donna, Debbie, and Sally are at the Café Court in the mall. They consumed a total of 9 tacos, 3 brownies, and 3 iced teas. Donna ate more tacos than Sally. Debbie ate 2 tacos and 1 brownie. Brownies cost $1.00 more than tacos, but less than iced tea.
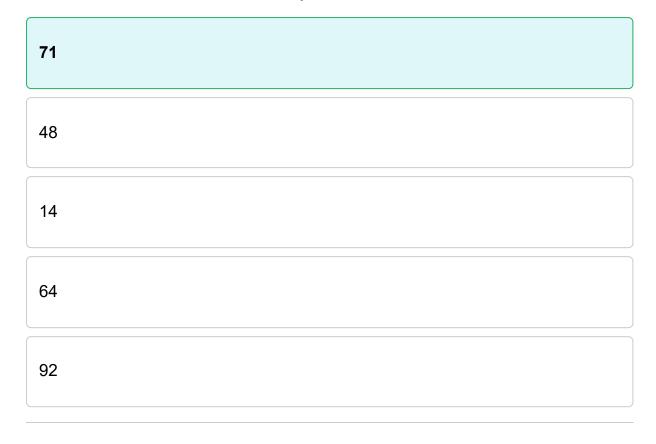
If Donna ate 4 tacos, how many tacos did Sally eat?

3

5

4

2

1

Correct answer: 3

You know that 9 tacos were purchased. Debbie ate 2 tacos, and Donna ate 4 tacos. You will need to subtract the tacos Debbie and Donna ate from the number purchased:

9 - 2 - 4 = 3

20.

Wendy and Robin cut a total of 156 heads of hair this week. If Wendy cut 14 more heads of hair than Robin did, how many heads of hair did Robin cut?

71

48

14

64

92

Correct answer: 71

Backsolving is the easiest way to solve this problem. To backsolve, choose the answer choice that is the middle option to start with, and work toward the correct answer.

64 is the middle option in the answer bank. If Wendy and Robin cut a total of 156 heads of hair and Robin cut 64, that would leave Wendy cutting 92 heads of hair. Wendy's 92 heads of hair less Robin's 64 heads of hair equals 28 heads of hair. This answer choice proves to be too low, as you only want Wendy cutting 14 more heads of hair than Robin, so you need to choose the answer choice that is higher than 64.

The answer choice that is higher than 64 is 71. If Wendy and Robin cut a total of 156 heads of hair and Robin cut 71, that would leave Wendy cutting 85 heads of hair. Wendy's 85 heads of hair less Robin's 71 heads of hair equals 14 heads of hair. Thus, you can determine Wendy cut 14 more heads of hair than Robin did.

You can also solve this problem by setting up the algebraic equation:

$(x + 14) + x = 156$

$14 + 2x = 156$

$2x = 142$

$x = 71$

21.

Clay and Reese mowed a total of 50 yards this week. If Clay mowed 6 more yards than Reese, how many yards did Reese mow?

22

28

19

25

31

Correct answer: 22

Backsolving is the easiest way to solve this problem. To backsolve, choose the answer choice that is the middle option to start with, and work toward the correct answer.

25 is the middle option in the answer bank. If Clay and Reese mowed a total of 50 yards and Reese mowed 25 yards, that would leave Clay mowing 25 yards. Clay's 25 yards less Reese's 25 yards equals 0 yards. This answer choice proves to be too high, as you want Clay to mow 6 more yards than Reese, so you will need to choose the answer choice that is less than 25.

The answer choice that is below 25 is 22. If Clay and Reese mowed a total of 50 yards and Reese mowed 22 yards, that would leave Clay mowing 28 yards. Clay's 28 yards less Reese's 22 yards equals 6 yards. Thus, you can determine Clay mowed 6 more yards than Reese.

You can also solve this problem by setting up the algebraic equation:

$(6 + x) + x = 50$

$6 + 2x = 50$

$2x = 44$

$x = 22$

22.

If 4z -24 < -4z, which of the following must be **true**?

3 > z

-4 > z

3 < z

3/4 < z

- 3 < z

Correct answer: 3 > z

Subtract 4z from both sides of the equation: -24 < -8z

Divide both sides of the equation by -8: 3 > z

Remember that the sign reverses direction when multiplying or dividing by a negative number.

23.

View the *supporting details* to answer the following question.

Which of the following types of beverages saw the **smallest** percent increase in sales from 2011 to 2012?

Root Beer

Soda

Ginger Ale

Orange

Correct answer: Root Beer

Calculate the percent increase using the percent change formula (difference / original). The total for Root Beer in 2011 is $25,000 and in 2012 is $25,500.

The percent change fraction is $500/$25,000, thus giving you the smallest percent increase at 2.0%.

24.

Dividing a number by 4 is the same as multiplying that number by:

1/4

1/2

4

2

0.4

Correct answer: 1/4

If you select the number 20, and divide it by 4, the result is 5.

If you multiply the number 20 by 1/4, the result is 5.

1/4 means 1 divided by 4.

25.

If 1/4p - 3 = 9, what is twice the value of p?

96

24

12

48

9

Correct answer: 96

First, add 3 to each side of the equation: 1/4p = 12

Now, divide each side of the equation by 1/4: p = 48

*The question asks for twice the value of p: 48 * 2 = 96*

26.

Susan went shopping and purchased a $125.00 purse, a $50.00 shirt, a $75.00 pair of shoes, and a $1,250.00 ring. How much money did Susan spend while she was shopping?

$1,500.00

$500.00

$1,250.00

$1,625.00

$1,400.00

Correct answer: $1,500.00

In order to find the amount that Susan spent shopping, you will need to add together the items she purchased.

$125.00 + $50.00 + $75.00 + $1,250.00 = $1,500.00

27.

If 7x - 14 = 14, what is three times the value of x?

12

4

6

8

10

Correct answer: 12

The question asks for three times the value of the variable x. First, solve for x:

7x - 14 = 14

7x = 28

x = 4

*Now, multiply to find three times the value of x: 4 * 3 = 12.*

28.

Cindy baked 15 dozen cookies. She took 3 dozen cookies to work, 5 dozen to her son's school, and 1 dozen to her father's house. How many cookies does Cindy have left?
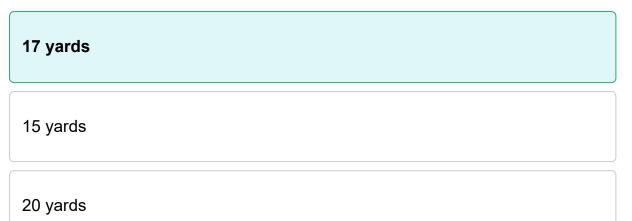
6 dozen

5 dozen

7 dozen

4 dozen

8 dozen

Correct answer: 6 dozen

You will need to subtract the total number of cookies that Cindy gave away from the initial quantity of 15 dozen.

15 - 3 - 5 - 1 = 6

29.

Carol mows 90 yards a month. The first week of the month she mowed 25 yards, the second week she mowed 20 yards, and the third week she mowed 28 yards. How many yards does Carol have left to mow during the last week of the month?

17 yards

15 yards

20 yards

30 yards

12 yards

Correct answer: 17 yards

You will need to subtract the total number of yards that Carol has already mowed from the initial number of 90 yards a month.

90 - 25 - 20 - 28 = 17

30.

Ken needs to increase his weekly pay to $248.00. Ken currently works 20 hours a week and earns $7.75 an hour. How many additional hours would Ken need to work in order to meet his goal of $248.00 per week?

12

10

8

14

16

Correct answer: 12

First, you need to calculate the current amount of money that Ken earns per week. By multiplying 20 by $7.75, you find that Ken earns $155.00 per week.

To get to $248.00 per week, Ken needs to increase his weekly pay by $93.00. Divide this total by his rate of $7.75 per hour, and you get the answer: 12 more hours.

31.

View the *supporting details* to answer the following question.

Which type of beverage saw the **largest** percent increase in sales from 2011 to 2012?

Diet Soda

Grape

Ginger Ale

Orange

Correct answer: Diet Soda

First, eliminate any answer choice that does not increase. Grape did not see an increase.

Next, calculate the percent increase using the percent change formula (difference / original). The total for Diet Soda in 2011 was $30,000 and in 2012 was $34,000.

The percent change fraction is $4,000/$30,000, which equals the largest percent increase at 13.33%.

32.

Betty and Kris spent a total of $360 shopping today. If Betty spent $80 more than Kris did, how many dollars did Kris spend?

$140

$220

$80

$100

Correct answer: $140

Backsolving is the easiest way to solve this problem. To backsolve, choose the answer choice that is the middle option to start with, and work toward the correct answer.

$120 is the middle option in the answer bank. If Betty and Kris spent a total of $360 and Kris spent $120, that would leave Betty spending $240 dollars. Betty's $240 less Kris's $120 equals $120. This answer choice proves to be too low, as you want Betty to spend only $80 more than Kris, so you will need to choose the answer choice that is higher than $120.

The answer choice that is higher than $120 is $140. If Betty and Kris spent a total of $360 and Kris spent $140, that would leave Betty spending $220 dollars. Betty's $220 less Kris's $140 equals $80. Thus, you can determine Betty spent $80 more than Kris did.

You can also solve this problem setting up the algebraic equation:

(x + $80) + x = $360

$80 + 2x = $360

2x = $280

x = $140

33.

View the *supporting details* to answer the following question.

Which month saw the **largest** percent increase in popcorn sales from 2009 to 2010?

January

May

June

February

Correct answer: January

First, eliminate any answer choice that does not increase. May and June did not see an increase.

Next, calculate the percent increases using the percent change formula (difference / original).

The total in January 2009 was $900.00 and the total in January 2010 was $950.00.

The percent change fraction is $50/$900.00, which equals the largest percent increase at 5.6%.

34.

Alisha is selling candy bars for the school fundraiser. She starts with a box of 30 candy bars and sells 4 on Monday, 5 on Tuesday, and 8 on Wednesday. How many candy bars does Alisha still need to sell?

13

15

21

17

9

Correct answer: 13

You need to subtract the total number of candy bars that Alisha has sold from the initial quantity:

30 - 4 - 5 - 8 = 13

35.

Multiplying a number by 1/5 is the same as dividing that number by:
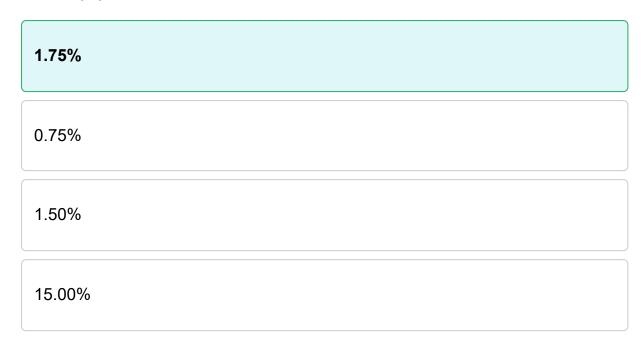
5

10

1/2

0.5

0.2

Correct answer: 5

If you select the number 20 and multiply it by 1/5, the result is 4.

If you divide the number 20 by 5, the result is 4.

1/5 means 1 divided by 5.

36.

View the *supporting details* to answer the following question.

What was the percent increase of popcorn sales from the first half of 2009 to the first half of 2010?

1.75%

0.75%

1.50%

15.00%

Correct answer: 1.75%

First, you need to add the popcorn sales shown for the first half of 2009. Then, you need to add the popcorn sales shown for the first half of 2010.

Now, calculate the percent increase using the percent change formula (difference / original). The total for 2009 was $5,420.00 and the total for 2010 was $5,515.00.

The percent change fraction is $95.00/$5,420.00, which equals a 1.75% increase in popcorn sales.

37.

If 4x - 2 = 22, then what does x equal?

6

3

4

5

8

Correct answer: 6

First, add 2 to each side of the equation: 4x = 24.

Now, divide each side of the equation by 4: x = 6.

38.

If 8n - t + h = z - x, what is the value of n when t = 5, h = 3, z = 3, and x = 1?

1/2

2

-1

3

1/3

Correct answer: 1/2

Here is the equation you are given: 8n - t + h = z - x

Now, substitute the values you are given for t, h, z, and x: 8n - 5 + 3 = 3 - 1

8n - 2 = 2

8n = 4

n = 1/2

39.

If 9x = 18 + 3x, what is the value of 7x?

21

3

8

9

18

Correct answer: 21

The question asks for the value of 7x. First, solve for x:

9x = 18 + 3x

6x = 18

x = 3

Now, find the value of 7x:

*7 * 3 = 21*

40.

Brent measured the board at 8 3/4 feet. Shawn measured the same board at 6 1/2 feet. What is the difference between Brent's measurement and Shawn's measurement?

2 1/4 feet

3 feet

2 1/3 feet

1 2/3 feet

Correct answer: 2 1/4 feet

To find the difference, convert all mixed numbers to improper fractions.

8 3/4 = 35/4

6 1/2 = 13/2
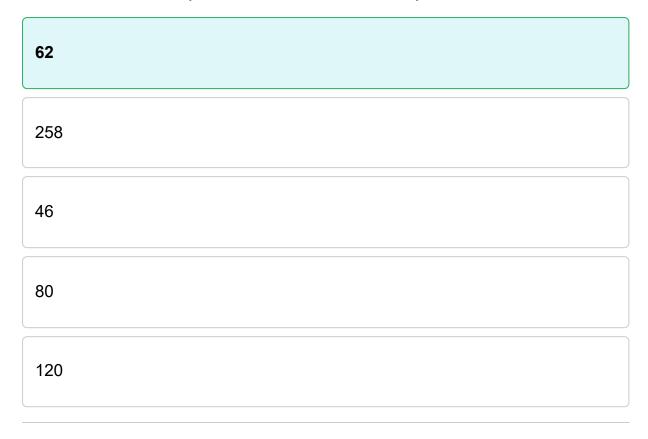
Next, find a common denominator and subtract the numbers.

35/4 - (13/2)(2/2)

35/4 - 26/4 = 9/4 = 2 1/4 feet

8 3/4 - 6 2/4 = 2 1/4

You could also use the Bowtie method, where you first need to convert the mixed numbers into improper fractions:

8 3/4 = 35/4, and 6 1/2 = 13/2

Then, 35/4 - 13/2 = (70 - 52) / 8 = 18/8 = 9/4 = 2 1/4.

41.

The local motorcycle dealership was hosting a ride on Saturday. There were 310 motorcycle riders on Saturday's ride. If there were four times as many male riders as female riders, how many female riders were on Saturday's ride?

62

258

46

80

120

Correct answer: 62

Backsolving is the easiest way to solve this problem. To backsolve, choose the answer choice that is the middle option to start with, and work toward the correct answer.

80 is the middle option in the answer bank. If there were 80 female riders, then 320 male riders were on Saturday's ride. This answer proves to be too high, as you only want 310 riders, not 400. You will need to choose another answer choice that is lower than 80.

The answer choice that is lower than 80 is 62. If there were 62 female riders, then 248 male riders were on Saturday's ride. This gives you the total of 310 riders that you are looking for.

42.

Don recycled 8 pounds of aluminum cans in May, 6 pounds in June, and 10 pounds in July. How many total pounds of aluminum cans did Don recycle in May and July?

18 pounds

16 pounds

14 pounds

24 pounds

12 pounds

Correct answer: 18 pounds

In order to find the number of pounds that Don recycled in May and in July, you will need to add together the total pounds recycled in those months.

8 pounds + 10 pounds = 18 pounds

43.

Claire walked 3 miles on Wednesday, 5 miles on Friday, and 2 miles on Saturday. How many more miles did Claire walk on Friday than on Saturday?

3

2

1

4

5

Correct answer: 3

To find the correct answer, subtract the two values:

5 - 2 = 3

44.

Pete and Ian checked a total of 490 prescriptions today. If Pete checked 46 more prescriptions than Ian did, how many prescriptions did Ian check?

222

268

46

199

291

Correct answer: 222

Backsolving is the easiest way to solve this problem. To backsolve, choose the answer choice that is the middle option to start with, and work toward the correct answer.

222 is the middle option in the answer bank. If Pete and Ian checked a total of 490 prescriptions and Ian checked 222 prescriptions, that would leave Pete checking 268 prescriptions. Pete's 268 prescriptions less Ian's 222 prescriptions equals 46 prescriptions. Thus, you can determine Pete checked 46 more prescriptions than Ian did.

You can also solve this problem by setting up the algebraic equation:

(x + 46) + x = 490

46 + 2x = 490

2x = 444

x = 222

45.

The restaurant served 26 chicken dinners, 32 steak dinners, 15 lobster dinners, and some shrimp dinners. There is a 3 to 5 ratio of chicken dinners to shrimp dinners. Which of the following numbers in the problem are needed to find the total number of shrimp dinners that the restaurant served?

26, 3, and 5 only

32, 3, and 5 only

15, 3, and 5 only

26, 32, 15, 3, and 5

26, 15, and 5 only

Correct answer: 26, 3, and 5 only

In order to find the actual number of shrimp dinners, you need the initial ratio, plus one actual number. The initial ratio of chicken to shrimp is 3 to 5, and the actual number of chicken dinners is 26.

You do not need the fact that the restaurant served 32 steak dinners or 15 lobster dinners. These pieces of information do nothing to help you solve the ratio box involving chicken and shrimp dinners.

46.

Bonnie needs to increase her monthly sales to $5,500.00. Bonnie currently sells 180 phone cases a month at $25.00 per case. How many additional phone cases would Bonnie need to sell in order to meet her goal of $5,500.00 per month?

40

35

30

25

45

Correct answer: 40

First, you need to calculate the current amount of sales that Bonnie makes per month. By multiplying 180 by $25.00, you find that Bonnie makes $4,500.00 per month.

To get to $5,500.00 per month, Bonnie needs to increase her monthly sales by $1,000.00. Divide this total by her phone case price of $25.00, and you get the answer: 40 more phone cases.

47.

The hot dog stand sells 1,250 hot dogs every week. How many hot dogs does the hot dog stand sell in 52 weeks?
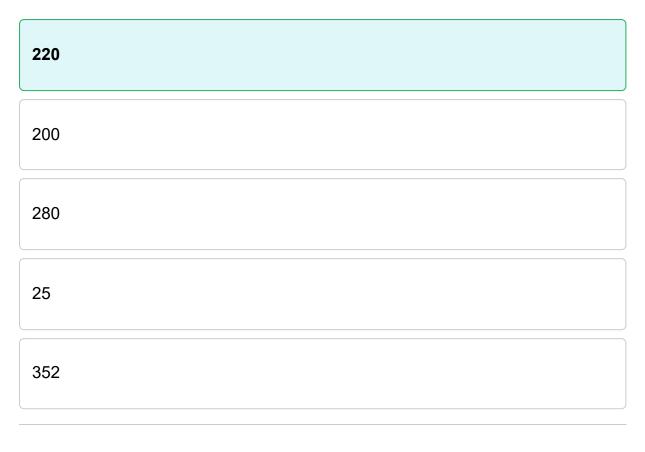
65,000

60,000

55,000

62,500

57,250

Correct answer: 65,000

In order to find out how many hot dogs were sold over the 52-week period, you need to multiply.

*1,250 * 52 = 65,000*

48.

Shelly, Alice, and Kim all own land. There are a total of 880 acres between them. If Kim owns 40% of the acres, and Shelly owns 35% of the acres, how many acres does Alice own?

220

200

280

25

352

Correct answer: 220

You know that Kim owns 40% of the acres, and Shelly owns 35% of the acres, so that would leave Alice owning 25% of the acres.

To get the total number of acres that Alice owns, multiply 0.25 by 880, to get 220.

49.

If 2m + 18 > 11m, which of the following must be **true**?

2 > m

13 > m

2 < m

9 < m

9 > m

Correct answer: 2 > m

Subtract 2m from both sides of the equation: 18 > 9m

Divide both sides of the equation by 9: 2 > m

50.

Andrea answers 1,000 questions a day. By 9:30 a.m., Andrea had already answered 250 questions, at 1:30 p.m. she had answered an additional 300 questions, and by 6:30 p.m. she had answered another 200 questions.

If Andrea answers 1,000 questions a day, how many more questions will she answer before the day is over?

250 questions

275 questions

200 questions

300 questions

350 questions

Correct answer: 250 questions

You will need to subtract the total number of questions that Andrea has already answered from the initial number of 1,000 questions.

1,000 - 250 - 300 - 200 = 250

51.

Pick 'n Save sells 550 boxes of cereal every day. How many boxes of cereal does Pick 'n Save sell in 30 days?

16,500 boxes of cereal

1,650 boxes of cereal

33,000 boxes of cereal

8,250 boxes of cereal

Correct answer: 16,500 boxes of cereal

In order to find out how many boxes of cereal were sold over the 30-day period, you need to multiply:

550 × 30

1. Set up the long multiplication.

2. Calculate 0 x 3, which is 0.

3. Calculate 5 x 3, which is 15.

Since 15 is two-digit, we carry the first digit 1 to the next column.

4. Calculate 5 x 3, which is 15. Now add the carry digit of 1, which is 16. Since 16 is two-digit, we carry the first digit 1 to the next column.

5. Bring down the carry digit of 1.

6. Therefore, 550 x 30 = 16,500.

52.

Cale is laying block for his basement. When finished, the total length of the basement will be 130 feet. For three days straight, Cale lays 10 feet of block a day. If Cale works at the same pace, how many more days will it take to finish laying block for the basement?

10 days

8 days

9 days

11 days

12 days

Correct answer: 10 days

*First, multiply to find out how much of the basement Cale has finished: 3 * 10 = 30 feet.*

Subtract this from the total of 130 feet, and you get 100 feet remaining.

Divide 100 feet by 10 feet of block a day, and you get 10 days to finish the basement.

53.

If -9 + 3x > 12, which of the following must be **true**?

x > 7

x < 7

x > 1

x > 1/7

x > 3

Correct answer: x > 7

First, simplify the inequality to get 3x > 21.

Then, divide by 3 to get that x > 7.

54.

Cheryl went to the grocery store with $100.00 to spend. She purchased 4 boxes of cereal at $3.50 per box, 2 gallons of milk at $3.00 a gallon, 6 steaks at $5.50 per steak, and 6 baking potatoes at $1.00 each.

How much change will Cheryl have?

$41.00

$55.00

$47.00

$67.00

$36.00

Correct answer: $41.00

To find out how much change Cheryl will have, you will need to subtract the items that she purchased from the initial amount of $100.00.

$100.00 - 4($3.50) - 2($3.00) - 6($5.50) - 6($1.00) =

$100.00 - $14.00 - $6.00 - $33.00 - $6.00 = $41.00

55.

John drinks 3 glasses of water every 3 hours. How many glasses of water does John drink in a 24-hour period?

24

12

9

15

27

Correct answer: 24

In order to find out how many glasses of water John drinks in a 24-hour period, you need to start by dividing: 24/3 = 8.

*Now, you need to multiply: 8 * 3 = 24.*

56.

What does x equal if (5x + 1) * 3 = 48?

3

1

6

-3

8

Correct answer: 3

First, multiply 5x by 3 and 1 by 3:

15x + 3 = 48

Then, subtract 3 from each side of the equation:

15x = 45

Now, divide each side of the equation by 15:

x = 3

57.

Roger wanted to purchase a small utility tractor. The tractor cost $12,500.00. The blade for the tractor cost $800.00. The bucket for the tractor cost $1,500.00. The brush guard for the tractor cost $900.00.

If Roger wanted to purchase the tractor with the blade and the bucket, how much money would Roger need?

$14,800.00

$14,000.00

$14,200.00

$15,700.00

$15,000.00

Correct answer: $14,800.00

In order to find the amount of money Roger would need, add together the amounts for the items he wishes to buy:

$12,500.00 + $800.00 + $1,500.00 = $14,800.00

58.

If 11 - 5z < -4, which of the following must be **true**?

z > 3

z > 1/3

z > -3

z < 3

z < -3

Correct answer: z > 3

Subtract 11 from both sides of the equation: -5z < -15

Divide both sides of the equation by -5: z > 3

Remember that the sign reverses direction when multiplying or dividing by a negative number.

59.

Bryan volunteers 90 minutes a month at the local fire department. Bryan's wife Justine volunteers 60 minutes a month. Together, how many minutes do Bryan and Justine volunteer each year?

1,800 minutes

1,080 minutes

720 minutes

1,600 minutes

2,050 minutes

Correct answer: 1,800 minutes

Start by adding the number of minutes that Bryan and Justine both volunteer: 90 + 60 = 150.

*Now, multiply 150 by 12 months to get the annual number of minutes they volunteer: 150 * 12 = 1,800.*

60.

Claire walked 3 miles on Wednesday, 5 miles on Friday, and 2 miles on Saturday. How many total miles did Claire walk?

10

3

8

5

7

Correct answer: 10

To find the correct answer, add the three values:

3 + 5 + 2 = 10

61.

If 4 - 3p < 25, which of the following must be **true**?

p > -7

p < -7

p < 7

p < 1/7

p > -1/7

Correct answer: p > -7

Subtract 4 from both sides of the equation: -3p < 21

Divide both sides of the equation by -3: p > -7

Remember that the sign reverses direction when multiplying or dividing by a negative number.

62.

If (3n - t) / (n + 1) = g + p, what is the value of g when n = 4, t = 2, and p = 1?

1

4

-1

-2

3

Correct answer: 1

Here is the equation you are given: (3n - t) / (n + 1) = g + p

*Now, substitute the values you are given for n, t, and p: (3 * 4 - 2) / (4 + 1) = g + 1*

10 / 5 = g + 1

2 = g + 1

g = 1

63.

Debbie ordered a pizza with sausage, mushrooms, and onion. A one-topping pizza costs $8.00, and additional toppings are $1.00 each. Debbie pays with a twenty-dollar bill. Debbie uses the following expression to calculate the amount of money she should receive back from the purchase:

$20.00 - ($8.00 + $1.00 + $1.00)

Which of the following expressions could Debbie have also used?

$12.00 - 2 * $1.00

2 * ($20.00 - $8.00 - $1.00)

$8.00 + (2 * $1.00) - $20.00

$1.00 - $20.00 + $8.00

2($20.00 - $1.00) + ($20.00 - $8.00)

---

*Correct answer: $12.00 - 2 * $1.00*

If you solve the expression given to you, you have $20.00 - $10.00 = $10.00. Therefore, the correct answer needs to produce a value of $10.00.

*The expression $12.00 - 2 * $1.00 = $10.00. This yields the same value as the given expression, so it is the correct answer.*

64.

3 more than 8 times a number is 27. What is the number?

3

4

6

2

9

Correct answer: 3

In algebraic form, the equation is 3 + 8n = 27.

To solve the equation, subtract 3 from both sides of the equation, giving you 8n = 24.

Divide both sides by 8 to get n = 3.

65.

June uses her own car to travel for work. Within the last month, June made 5 trips to Columbus, and 8 trips to Cleveland. The mileage reimbursement is $0.50 per mile. The round trip to and from Columbus is 110 miles and the round trip to and from Cleveland is 250 miles. June uses the following expression to calculate her mileage reimbursement for the trips:

5($0.50 x 110) + 8($0.50 x 250)

Which of the following expressions could June have also used?

5 x $55.00 + 8 x $125.00

13($0.50 x 360)

5 + 8($0.50 x 110 + 250)

5($0.50 x 250) x 8

Correct answer: 5 x $55.00 + 8 x $125.00

If you solve the expression given to you, you have $275.00 + $1,000.00 = $1,275.00. Therefore, the correct answer needs to produce a value of $1,275.00. The expression 5 x $55.00 + 8 x $125.00 = $1,275.00. This yields the same value as the given expression, so it is the correct answer.

13($0.50 x 360) would yield $2,340 as an answer.

5 + 8($0.50 x 110 + 250) would yield $2,445 as an answer.

5($0.50 x 250) x 8 would yield $5,000 as an answer.

66.

Every 30 minutes, 500 Americans are involved in vehicular accidents. How many vehicular accidents occur in 600 minutes?

10,000

18,000

5,000

9,000

12,000

Correct answer: 10,000

In order to find out how many vehicle accidents occur over a 600-minute period, you need to start by dividing: 600/30 = 20.

*Now, you need to multiply: 20 * 500 = 10,000.*

67.

If 1/3(z) - 2 = 5, what is three times the value of z?

63

21

7

3

5

Correct answer: 63

First, add 2 to each side of the equation: 1/3(z) = 7

Now, divide each side of the equation by 1/3: z = 21

*The question asks for three times the value of z: 21 * 3 = 63*

68.

The grocery store stocks 15 tomatoes, 25 cucumbers, and some watermelons. There is a 5 to 9 ratio of tomatoes to watermelons. Which of the following numbers in the problem are needed to find the total number of watermelons that the grocery store stocks?

15, 5, and 9 only

25, 5, and 9 only

15, 25, 5, and 9

5 and 9 only

15 and 25 only

Correct answer: 15, 5, and 9 only

In order to find the actual number of watermelons, you need the initial ratio, plus one actual number. The initial ratio of tomatoes to watermelons is 5 to 9, and the actual number of tomatoes is 15.

You do not need the fact that there were cucumbers stocked. This piece of information does nothing to help you solve the ratio box involving tomatoes to watermelons.

69.

Barbara needs to increase her pay to $1,200.00 per week. Barbara currently works 25 hours per week and earns $30.00 an hour. How many additional hours would Barbara need to work in order to increase her pay to $1,200.00 per week?

15

10

13

19

24

Correct answer: 15

First, you need to calculate the current amount of money that Barbara earns per week. By multiplying 25 by $30.00, you find that Barbara earns $750.00 per week.

To get to $1,200.00 per week, Barbara needs to increase her weekly pay by $450.00. Divide this total by her rate of $30.00 per hour, and you get the answer: 15 more hours.

70.

What is the difference between 15.9 and 6.4816?

9.4184

9.5

9.5215

9.5184

9.3816

Correct answer: 9.4184

When subtracting decimals, be sure to align the decimals vertically:

> *15.9000*
> *- 6.4816*
> *= 9.4184*

71.

Each of the 25 children in a group gets to pick one and only one bumper car. There are 8 pink bumper cars, 9 blue bumper cars, and 8 yellow bumper cars. At this very instant, 19 of the total bumper cars have been selected.

Which of the following facts can be determined from the information given above?

The number of children in the group that have not yet chosen a bumper car

The number of children that chose a pink bumper car

The number of boys who selected a blue bumper car

The total number of children at the theme park

The ratio of boys to girls choosing bumper cars

Correct answer: The number of children in the group that have not yet chosen a bumper car

You will want to eliminate the answer choices you know are wrong and focus on the information you are given. You know that 19 of the bumper cars have been chosen, and that there are a total of 25 children who are picking a bumper car. Therefore, you can determine how many children have not yet chosen a bumper car.

72.

The chef used 2 tablespoons of salt, 4 tablespoons of baking soda, and some pepper. There is a 1 to 3 ratio of salt to pepper. Which of the following numbers in the problem are needed to find the total number of tablespoons of pepper that the chef will use?

2, 1, and 3 only

4, 1, and 3 only

4, 2, 1, and 3

1 and 3 only

2 and 4 only

Correct answer: 2, 1, and 3 only

In order to find the actual number of tablespoons of pepper, you need the initial ratio, plus one actual number. The initial ratio of salt to pepper is 1 to 3, and the actual number of tablespoons of salt is 2.

You do not need the fact that the chef used 4 tablespoons of baking soda. This piece of information does nothing to help you solve the ratio box involving salt and pepper.

73.

If 7 + 5y = 52, what is one-third the value of y?

3

45

9

5

27

Correct answer: 3

First, subtract 7 from each side of the equation: 5y = 45

Now, divide each side of the equation by 5: y = 9

*The question asks for one-third the value of y: 9 * 1/3 = 3*

74.

A vehicle seats 7 passengers. If there are 91 people, how many vehicles are needed to transport everyone?

13 vehicles

12 vehicles

14 vehicles

15 vehicles

16 vehicles

Correct answer: 13 vehicles

To find the number of vehicles needed, divide 91 by 7. The answer comes out to 13.

75.

View the *supporting details* to answer the following question.Which vehicle saw the

Which vehicle saw the **largest** percent increase in sales from 2008 to 2009?

Sport Coupe

SUV

Truck

Crossover

Correct answer: Sport Coupe

Calculate the percent increase using the percent change formula (difference / original).

The total for the Sport Coupe in 2008 is $500 and in 2009 is $550. The percent change fraction is $50/$500, thus giving you the largest percent increase at 10.0%.

76.

If 12 - 4t = 8, what is the value of 3t?

3

-4

1

-3

4

Correct answer: 3

First, subtract 12 from each side of the equation: -4t = -4

Now, divide each side of the equation by -4: t = 1

*The question asks you to find the value of 3t: 3 * 1 = 3*

77.

The pharmacy filled 25 brand name prescriptions, 35 generic prescriptions, and some OTC prescriptions. There is a 1 to 3 ratio of generic prescriptions to OTC prescriptions. Which of the following numbers in the problem are needed to find the total number of OTC prescriptions that were filled?

35, 1, and 3 only

25, 1, and 3 only

35, 25, 1, and 3

1 and 3 only

35, 25, and 3 only

Correct answer: 35, 1, and 3 only

In order to find the actual number of OTC prescriptions, you need the initial ratio, plus one actual number. The initial ratio of generic to OTC is 1 to 3, and the actual number of generic is 35.

You do not need the fact that there were brand name prescriptions filled. This piece of information does nothing to help you solve the ratio box involving generic and OTC.

78.

Sam's flight was 2,511 miles. Rod's flight was 1,918 miles. Ethan's flight was 1,876 miles. How many more miles did Sam fly than Ethan did?

635

42

593

535

493

Correct answer: 635

To find the correct answer, subtract the two values:

2,511 - 1,876 = 635

79.

If n + z(1/4) - w = p - 6, what is the value of z when n = 12, w = 2, and p = 18?

8

1/2

2

4

2 1/4

Correct answer: 8

Here is the equation you are given: n + z(1/4) - w = p - 6

Now, substitute the values you are given for n, w, and p: 12 + z(1/4) - 2 = 18 - 6

10 + z(1/4) = 12

z(1/4) = 2

z = 8

80.

Sandie collects stamps. Before she attended a recent stamp auction, she had 395 different stamps. At the auction, she won 8 times her collection. How many stamps does Sandie now own?

3,555 stamps

2,765 stamps

3,160 stamps

3,260 stamps

3,365 stamps

Correct answer: 3,555 stamps

*Sandie had 395 stamps and won 8 times that amount. Multiply to get how many Sandie won: 395 * 8 = 3,160.*

Add this amount to her original amount to find the answer: 3,160 + 395 = 3,555.

81.

Julie buys a car with power windows, air conditioning, and a sun roof. The car costs $20,000.00 and the options cost $500.00 each. Julie pays with a $22,000.00 check. Julie uses the following expression to calculate the amount of money she should receive back from the purchase:

$22,000.00 - ($20,000.00 + $500.00 + $500.00 + $500.00)

Which of the following expressions could Julie have also used?

$22,000.00 - $20,000.00 - 3($500.00)

3 * ($22,000.00 - $25,000.00 - $500.00)

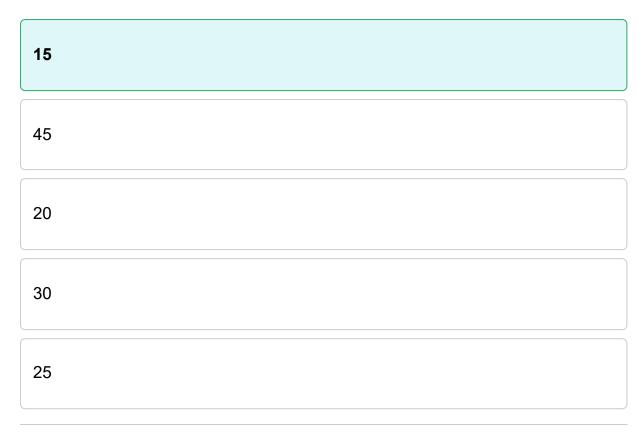$20,000.00 + (3 * $500.00) - $22,000.00

$500.00 - $22,000.00 + $20,000.00

3($22,000.00 - $500.00) + ($22,000.00 - $20,000.00)

Correct answer: $22,000.00 - $20,000.00 - 3($500.00)

If you solve the expression given to you, you have $22,000.00 - $21,500.00 = $500.00. Therefore, the correct expression needs to produce a value of $500.00.

The expression $22,000.00 - $20,000.00 - 3($500.00) = $500.00. This yields the same value as the given expression, so it is the correct answer.

82.

The club sold sixty rose bushes for the fundraiser. If there were three times as many pink rose bushes that sold, how many yellow rose bushes were sold for the fundraiser?

15

45

20

30

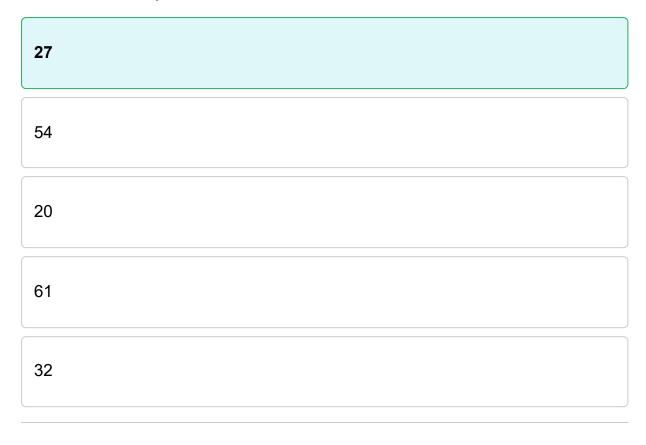25

Correct answer: 15

Backsolving is the easiest way to solve this problem. To backsolve, choose the answer choice that is the middle option to start with, and work toward the correct answer.

25 is the middle option in the answer bank. If there were 25 yellow rose bushes that sold, then 75 pink rose bushes were sold. This answer choice proves to be too high, as you only want to sell 60 rose bushes, not 100. You will need to choose another answer choice that is lower than 25.

The answer choice that is under 25 is 20. If there were 20 yellow rose bushes that sold, then 60 pink rose bushes sold. This answer choice proves to be too high, as you only want to sell 60 rose bushes, not 80. You will need to choose another answer choice that is lower than 20.

The answer choice that is lower than 20 is 15. If there were 15 yellow rose bushes that sold, then 45 pink rose bushes were sold. This gives you the total of 60 rose bushes that you are looking for.

83.

The winery sold 81 cases of wine this week. If there were twice as many red cases that sold, how many white cases were sold this week?

27

54

20

61

32

Correct answer: 27

Backsolving is the easiest way to solve this problem. To backsolve, choose the answer choice that is the middle option to start with, and work toward the correct answer.

32 is the middle option in the answer bank. If there were 32 white cases, then 64 red cases sold this week. This answer proves to be too high, as you only want 81 cases, not 96. You will need to choose another answer choice that is lower than 32.

The answer choice that is lower than 32 is 27. If there were 27 white cases, then 54 red cases sold this week. This gives you the total of 81 cases that you were looking for.

84.

If 3x - 10 = 11, what is four times the value of x?

28

7

21

63

3

Correct answer: 28

First, add 10 to each side of the equation: 3x = 21

Now, divide each side of the equation by 3: x = 7

*The question asks for four times the value of x: 7 * 4 = 28*

85.

Don orders cable television with HBO, Starz, and Encore. Basic cable packages are $30.00, and additional channels are $10.00 each. Don pays with a hundred-dollar bill. Don uses the following expression to calculate the amount of money he should receive back from the order:

$100.00 - ($30.00 + $10.00 + $10.00 + $10.00)

Which of the following expressions could Don have also used?

$70.00 - 3 * $10.00

3 * ($100.00 - $30.00 - $10.00)

$30.00 + (3 * $10.00) - $100.00

$10.00 - $100.00 + $30.00

3($100.00 - $10.00) + ($100.00 - $30.00)

---

*Correct answer: $70.00 - 3 * $10.00*

If you solve the expression given to you, you have $100.00 - $60.00 = $40.00. Therefore, the correct answer needs to produce a value of $40.00.

*The expression $70.00 - 3 * $10.00 = $40.00. This yields the same value as the given expression, so it is the correct answer.*

86.

If -8z + 6 < 46, which of the following must be **true**?

z > -5

z > 5

z < -5

z < 1/5

z < -8

Correct answer: z > -5

Subtract 6 from both sides of the equation: -8z < 40

Divide both sides of the equation by -8: z > -5

Remember that the sign reverses direction when multiplying or dividing by a negative number.

87.

In 2004, Justin earned $30,000.00 per year. In 2012, Justin was earning $48,000.00 per year. What was the percent increase in Justin's salary?

60%

58%

56%

54%

18%

Correct answer: 60%

This is a percent increase problem. Use the formula for percent change: difference / original.

The difference between the two amounts is $18,000.00, and the original amount is $30,000.00.

$18,000.00 / $30,000.00 = 0.6, which is 60%.

88.

View the *supporting details* to answer the following question.

What percent of the total votes did blue jelly beans receive?

4%

12%

8%

7%

2%

Correct answer: 4%

You would need to add up the percentages for all other colors, and subtract the total from 100%.

12% + 6% + 20% + 55% + 3% = 96%

100% - 96% = 4%

89.

3/5 is how many times greater than 1/5?

3

2

2.5

3.5

4

Correct answer: 3

The mathematical expression would be:

*3/5 ÷ 1/5 = 3/5 * 5/1 = 15/5 = 3*

90.

Carrie types 55 words a minute. Jodie can type 45 words a minute. If Carrie and Jodie work together, how many minutes would it take them to type 25,000 words?

250 minutes

228 minutes

325 minutes

278 minutes

Correct answer: 250 minutes

Together, Carrie and Jodie can type 100 words a minute. Divide 25,000 words by 100 words a minute, and you get 250 minutes.

91.

Kara earns $1.00 for every 100 words that she writes. She just received a job offer to write 20 articles for a local newspaper, and each article is required to be 500 words long. What will Kara's earnings be after she completes all 20 articles?

$100.00

$20.00

$500.00

$1000.00

$10,000.00

Correct answer: $100.00

*First, you need to determine how much each article will pay: 500 / 100 * $1.00 = $5.00.*

*Then, you need to multiply the number of articles by the article price: 20 * $5.00 = $100.00.*

92.

Megan and Ashley have a combined weight of 280 pounds. Megan's weight is equal to 65% of the total weight. How much does Ashley weigh?

98 pounds

112 pounds

124 pounds

154 pounds

182 pounds

Correct answer: 98 pounds

You know that Megan's weight is equal to 65% of the total weight, so that would leave Ashley's weight equaling 35% of the total weight.

To get Ashley's total weight, multiply 0.35 by 280, to get 98 pounds.

93.

What does s equal if (6s - 2) / 2 = 8?

3

6

4

-4

2

Correct answer: 3

First, divide 6s by 2 and -2 by 2: 3s - 1 = 8

Then, add 1 to each side of the equation: 3s = 9

Now, divide each side of the equation by 3: s = 3

94.

If -5t + 8 > 35t, which of the following must be **true**?

1/5 > t

8 > t

9 > t

5 > t

1/8 > t

Correct answer: 1/5 > t

Add 5t to both sides of the equation: 8 > 40t

Divide both sides of the equation by 40: 1/5 > t

95.

Every 10 minutes, 200 gallons of water are purified. How many gallons of water are purified in 60 minutes?

1,200

600

900

800

1,000

Correct answer: 1,200

In order to find out how many gallons of water are purified over a 60-minute period, you need to start by dividing: 60 / 10 = 6.

*Now, you need to multiply: 6 * 200 = 1,200.*

96.

Three steaks were purchased from the grocery store. The first steak weighed 1 1/2 pounds, the second steak weighed 1 1/4 pounds, and the third steak weighed 1 1/8 pounds. What was the total weight of the three steaks purchased from the grocery store?

3 7/8 pounds

1 7/8 pounds

3 1/6 pounds

1 1/64 pounds

3 3/8 pounds

Correct answer: 3 7/8 pounds

Add the three fractional amounts together. In order to get the same denominator for each fraction, change 1/2 to 4/8, and 1/4 to 2/8.

Then, add the numbers. The result is 3 7/8 pounds.

1 4/8 + 1 2/8 + 1 1/8 = 3 7/8

97.

What is the difference between 1.6 and 0.154?

1.446

0.06

1.584

1.754

1.06

Correct answer: 1.446

When subtracting decimals, be sure to align the decimals vertically:

1.600
- 0.154
= 1.446

98.

If t - 1/2(z) + n = 3m - d, what is the value of m when t = 5, z = 8, n = 3, and d = 8?

4

2

1 1/2

-2

8

Correct answer: 4

Here is the equation you are given: t - 1/2(z) + n = 3m - d

Now, substitute the values you are given for t, z, n and d:

5 - 1/2(8) + 3 = 3m - 8

8 - 4 = 3m - 8

4 = 3m - 8

12 = 3m

4 = m

99.

Each of the 10 meeting attendees is asked to select one and only one seat. There are 5 seats available in the front row and 5 seats available in the second row. As of 1:05 p.m., 8 of the seats had been selected.

Which of the following facts can be determined from the information given above?

The total number of seats that have not yet been selected

The number of individuals that have chosen a seat in the front row

The number of males who selected a seat in the back row

The total number of seats that were selected by 1:00 p.m.

The ratio of males to females asked to select a seat

Correct answer: The total number of seats that have not yet been selected

You will want to eliminate the answer choices you know are wrong and focus on the information you are given. You know that 8 of the seats have been chosen, and that there are a total of 10 chairs available and 10 individuals selecting a seat. Therefore, you can determine how many seats have not yet been selected.

100.

What does z equal if 2z - 9 = 15?

12

3

6

9

48

Correct answer: 12

First, add 9 to each side of the equation: 2z = 24

Now, divide each side of the equation by 2: z = 12