CERTSHOP

ASVAB - Quiz Questions with Answers

Arithmetic Reasoning (AR)

1.

Kim's goal is to raise $150 to support her cause. She was able to collect $20.00 from one friend, $50.00 from her boss, and $25.00 from her father. How much more money does Kim need to raise in order to reach her goal?

$55.00

$45.00

$80.00

$75.00

Correct answer: $55.00

In order to solve this question, subtract $20, $50, and $25 from $150.

1. Simplify 20 + 50 + 25 to 95.

150 - 95

2. Set up the long subtraction.

3. Since 0 is less than 5, borrow 1 from the next column to make 10.

4. Calculate 10 - 5, which is 5.

5. Since 4 is less than 9, borrow 1 from the next column to make 14.

6. Calculate 14 - 9, which is 5.

7. Therefore, 150 - 95 = 55.

2.

Hector has tropical fish in an aquarium that holds 10 gallons of water. He buys six new Siamese fighting fish, each of which needs to be in its own aquarium, so he puts each of the new fish in its own pint jar.

Altogether, Hector has fish in how many total pints of water?

86

46

80

16

Correct answer: 86

There are eight pints in one gallon; therefore, Hector has 80 pints in his tropical fish aquarium. Added to the six pint jars of water for the new Siamese fighting fish, the correct answer is 86 pints.

3.

The populations of two neighboring countries are 60 million and 130 million. If their population increased by 1.02% and 0.8% respectively, find the difference in the population increase.

428,000

508,000

612,000

154,000

Correct answer: 428,000

Let's find the population increase of each individual country.

Population increase of the first country: 1.02 /100 × 60,000,000 = 612,000

Population increase of the second country: 0.8/100 × 130,000,000 = 1,040,000

The difference between the population increases is 1,040,000 - 612,000 = 428,000

4.

The nurse practitioner saw 12 patients today. Of these, half had respiratory issues, two were experiencing arthritic pain, and the rest were routine checks on patients with chronic conditions.

What is the ratio of patients seen today who had chronic conditions?

1:3

2:6

6:8

1:1

Correct answer: 1:3

Six patients had respiratory issues (1/2 of 12).

6 + 2 = 8

12 – 8 = 4 patients had chronic conditions.

4:12 had chronic conditions.

The highest common denominator of 4 and 12 is 4.

4/4 = 1

12/4 = 3

Therefore, the ratio of patients seen today who had chronic conditions is 1:3.

5.

Pascal is 2 inches taller than Francis, who is 5 inches shorter than Michael. If Michael is 5.5 feet, what is Pascal's height in inches?

63 inches

61 inches

69 inches

66 inches

Correct answer: 63 inches

First, convert feet into inches.

1 foot = 12 inches

5.5 feet = 5.5 × 12 = 66 inches

If Michael is then 66 inches, then Francis is 66 - 5 = 61 inches.

Pascal is two inches taller than Fracis.

61 + 2 = 63 inches

6.

A grade 5 class has three sections: east, west, and central. East has 22 students, west has 20 students, while central has 18 students. In a mathematics test, a third of the students from central and a quarter from west scored more than 70%.

If those who scored more than 70% from east are 2 more than the sum of those from central and west, find the total number of students who scored below 70%.

36

20

38

24

Correct answer: 36

First, find the number of students who scored more than 70%.

West: 1/4 × 20 = 5

Central: 1/3 × 18 = 6

The sum of the above is 5 + 6 = 11 students.

Next, find the number of students in the east who scored more than 70%.

East = 11 + 2 = 13

There are 13 + 11 = 24 students in total who scored more than 70%, but the question asks for the number of students who scored below 70%. To find this, add the total number of students.

22 + 20 + 18 = 60

Subtract the number of students who earned more than 70% to find the number who earned below 70%.

60 - 24 = 36 students

7.

The emergency room serviced 60 patients today. Jodi and Amanda were the only two nurses on staff. If Jodi cared for 28 patients, how many patients did Amanda care for?

32

38

55

27

Correct answer: 32

This problem can by solved by subtracting 28 from 83.

1. Set up the long subtraction.

2. Since 0 is less than 8, borrow 1 from the next column to make 10.

3. Calculate 10 - 8, which is 2.

4. Calculate 5 - 2, which is 3.

5. Therefore, 60 - 28 = 32.

8.

If Jeffrey can grade 7 exams every 2 1/4 hours, how many exams can he grade in 9 hours?

28

21

18

13

Correct answer: 28

Convert the mixed number to an improper fraction by multiplying the denominator by the base number and adding it to the numerator.

2 1/4 = (4 × 2 + 1)/4 = 9/4

Divide 9 hours by 9/4. Remember that when dividing by a fraction, you can multiply it by its reciprocal instead.

9 ÷ 9/4 = 9 × 4/9 = 36/9 = 4

Since Jeffrey can grade 7 exams in each 2 1/4 hour time period, multiply 4 by 7 to find the total number of exams he can grade in 9 hours.

4 × 7 = 28 exams

9.

Silfy's weight is 4 pounds more than twice Rooney's weight. If the sum of their weights is 310 pounds, determine Silfy's weight.

208 pounds

210 pounds

213 pounds

102 pounds

Correct answer: 208 pounds

Let Rooney's weight be x, so Silfy's weight is 2x + 4.

The sum of both weights is 310, so x + 2x + 4 = 310.

$x + 2x + 4 = 310$

$3x + 4 = 310$

$3x = 306$

$x = 102$

Rooney's weight is 102 pounds, so use the equation 2x + 4 to find Silfy's weight.

$2x + 4 = 2(102) + 4 = 204 + 4 = 208$

Silfy weighs 208 pounds.

10.

June had a pizza. She gave a fifth to her friend Sara and a quarter of the remainder to her friend Lillian. If she later gave them a third of the remainder to share equally, what fraction of the pizza did Lillian get?

3/10

3/5

1/5

2/5

Correct answer: 3/10

First, subtract each friend's portion from June's pizza.

To Sara, June gave 1/5 of the pizza.

1 - 1/5 = 4/5

To Lillian, June gave 1/4 of the remainder.

4/5 × 1/4 = 4/20 = 1/5

So, 4/5 - 1/5 = 3/5 of the pizza is left.

June then gave Sara and Lillian 1/3 of the remainder to share equally.

1/3 × 3/5 = 1/5

Sara and Lillian got 1/5 × 1/2 = 1/10 of the pizza each.

Add this portion to Lillian's first portion of 1/5 of the pizza.

1/10 + 1/5 = 1/10 + 2/10 = 3/10 of the pizza

11.

The product of two numbers is 14, while the sum of their squares is 100. Find the product of the square of the sum of the numbers and 4.

512

448

456

256

Correct answer: 512

Let the numbers be x and y.

xy = 14

The sum of their squares is: $x^2 + y^2 = 100$

The sum of the numbers is x + y.

The square of their sum is $(x+y)^2 = (x+y)(x+y) = x^2 + 2xy + y^2 = x^2 + y^2 + 2xy$

Since $x^2 + y^2 = 100$ and xy =14, we can substitute these values in the equation.

$x^2 + y^2 + 2xy = 100 + 2(14) = 128$

Then, we must multiply this value by 4.

4 x 128 = 512

12.

Seth rides his bicycle to the gym every day, going 15 miles per hour there and 12 miles per hour back. Each day, he bikes a total of 1 hour. What is the distance from Seth's house to his gym, rounded to the nearest mile?

6.67 miles

3.15 miles

9.07 miles

4.65 miles

Correct answer: 6.67 miles

Let x be the distance traveled to Seth's gym. The time it takes to bike to the gym looks like this:

Distance/speed = x/15

The time it takes to return looks like this:

Distance/speed = x/12

The total time to travel and return is 1 hour. Therefore,

x/15 + x/12 = 1

Next, find the common denominator in order to add the fractions and solve for x.

(x/15)(4/4) + (x/12)(5/5) = 1

4x/60 + 5x/60 = 1

9x/60 = 1

9x = 60

x = 60/9

x = 6.67 miles

13.

How many inches are in 3.25 feet?

39 inches

32.5 inches

26 inches

9.75 inches

Correct answer: 39 inches

There are 12 inches in one foot; therefore, there are 39 inches in 3.25 feet (12 x 3.25 = 39).

14.

Solve the following:

63 ÷ (-3 + 10) – 4 × 9

-27

45

-60

27

Correct answer: -27

Solve by using the order of operations. It's easy to do if you remember the acronym PEMDAS (Parentheses, Exponents, Multiplication, Division, Addition, Subtraction).

63 ÷ (-3 + 10) – 4 × 9

Solve the operation in parentheses first.

63 ÷ 7 – 4 × 9

Solve the multiplication next.

63 ÷ 7 – 36

Solve the division next.

9 – 36 = -27

15.

The physician's office billed the patient's insurance $375.00. The insurance company paid all but $35.00 of the claim. How much did the insurance company pay toward the claim?

$340.00

$410.00

$305.00

$250.00

Correct answer: $340.00

This question can be solved by subtracting $35.00 from $375.00.

1. Set up the long subtraction.

2. Calculate 5 - 5, which is 0.

3. Calculate 7 - 3, which is 4.

4. Calculate 3 - 0, which is 3.

5. Therefore, 375 - 35 = 340.

16.

Linda sold 20 apples for $8.00, making a profit of 14%. What was the original cost of each apple?

$0.35

$0.46

$0.49

$0.40

Correct answer: $0.35

To find the original cost of each apple, first find the selling price of each apple by dividing.

$8.00/20 = $0.40

Selling price of each apple is cost + profit, with cost being 100%.

Therefore, the selling price is 100% + 14% = 114%

Set up an equation to determine the original cost of each apple.

114%/100% × cost of each apple = 0.40

1.14x = 0.40

x = $0.35

17.

0.404 millimeters is equal to how many centimeters?

0.0404 centimeters

40.4 centimeters

4.04 centimeters

0.00404 centimeters

Correct answer: 0.0404 centimeters

One centimeter is equal to ten millimeters; therefore, 0.0404 centimeters is equal to 0.404 millimeters (0.404/10 = 0.0404).

18.

A tree nursery sells cypress seedlings at $3.60 each. Due to an increase in demand, the nursery increased the price by a sixth of the original price. How much does a customer buying 34 seedlings pay after the increase?

$142.80

$20.40

$102.00

$42.00

Correct answer: $142.80

First, find the new price of the seedlings.

Original price = $3.60

Change in price = $3.60 × 1/6 = 3.60/6 = 0.6

New price = $3.60 + $0.60 = $4.20 per seedling

Multiply this by 34 to find out the total amount the customer must pay.

$4.20 × 34 = $142.80

19.

Sam can lift a 176-pound weight for one minute less than Cecil. Arnold can lift the same weight for two minutes less than the total time taken by Sam and Cecil. If y represents Sam's time, find the expression showing the total lifting time for the three people.

4y

2y + 1

4y - 4

2y - 3

Correct answer: 4y

Sam = y minutes

Cecil = y + 1 minute

The sum of Sam's time and Cecil's time y + y + 1 = 2y + 1

Arnold = (2y + 1) - 2 = 2y - 1

Find the sum for Sam, Cecil and Arnold.

(2y + 1) + (2y - 1) = 4y

20.

What is the ratio of 8 feet to 28 inches?

24:7

2:7

5:3

7:24

Correct answer: 24:7

When comparing distances, we have to make sure that the terms are the same. To accomplish this, convert to inches.

Multiply 8 by 12, since there are 12 inches in a foot. This gives us 96 inches.

The ratio then becomes 96 inches to 28 inches, or 96:28.

Divide both numbers by 4 to reduce the ratio to 24:7.

21.

In her garden, Sylvia picked 45 flowers in three days. Each day she picked five more flowers than the previous day. How many flowers did Sylvia pick from her garden on the third day?

20

25

15

10

Correct answer: 20

Let x = the number of flowers Sylvia picked on day 1.

Set up the following equation and solve for x:

x + (x + 5) + (x + 10) = 45

Combine like terms.

3x + 15 = 45

Solve.

3x = 30

x = 10

Therefore, we know that Sylvia picked 10 flowers on the first day.

Since each day she picked 5 more flowers than the previous day, find the number she picked the second and third days.

Second day: 10 + 5 = 15

Third day: 15 + 5 = 20

22.

A milling machine was operated from 8:15 am until 4:09 pm the next day without stopping. How long did the machine operate?

31 hours and 54 minutes

7 hours and 6 minutes

32 hours and 34 minutes

7 hours 54 minutes

Correct answer: 31 hours and 54 minutes

From 8:15 am to 8:15 am the next day is 24 hours.

To find the time difference from 8:15 am to 4:09 pm, we can use military time.

4:09 pm - 8:15 am = 16:09 - 8:15, or 15:69 - 8:15, which is 7 hours and 54 minutes.

Add this to 24 hours.

24 + 7 hours 54 minutes = 31 hours and 54 minutes

23.

The pharmacy ordered 1200 vaccinations to distribute among five locations. The first location received 350, the second location received 175, the third location received 220, and the fourth location received 290.

How many vaccinations will the fifth location receive?

165

65

235

135

Correct answer: 165

This problem can be solved by subtracting 350, 175, 220, and 290 from 1,200.

1. Simplify 350 + 175 + 220 + 290 to 1,035.

1,200 - 1,035

2. Set up the long subtraction.

3. Since 0 is less than 5, borrow 1 from the next column to make 10.

4. Calculate 10 - 5, which is 5.

5. Calculate 9 - 3, which is 6.

6. Calculate 1 - 0, which is 1.

7. Therefore, 1,200 - 1,035 = 165.

24.

Brandy is responsible for approving her department's invoices. Today, Brandy approved a $153.36 electric invoice, a $56.20 Internet invoice, a $92.68 toner invoice, and a $210.11 credit card invoice.

What was the total amount that Brandy approved today?

$512.35

$605.23

$358.99

$456.15

Correct answer: $512.35

This question can be solved by adding $153.36, $56.20, $92.68, and $210.11.

1. Set up the long addition.

2. Calculate 6 + 0 + 8 + 1, which is 15. Since 15 is two-digit, we carry the first digit 1 to the next column.

3. Calculate 3 + 2 + 6 + 1, which is 12. Now add the carry digit of 1, which is 13. Since 13 is two-digit, we carry the first digit 1 to the next column.

4. Calculate 3 + 6 + 2 + 0, which is 11. Now add the carry digit of 1, which is 12. Since 12 is two-digit, we carry the first digit 1 to the next column.

5. Calculate 5 + 5 + 9 + 1, which is 20. Now add the carry digit of 1, which is 21. Since 21 is two-digit, we carry the first digit 2 to the next column.

6. Calculate 1 + 0 + 0 + 2, which is 3. Now add the carry digit of 2, which is 5.

7. Therefore, 153.36 + 56.20 + 92.68 + 210.11 = 512.35.

25.

The patient received a 30-day supply of his blood pressure medicine, which consisted of 60 tablets. How many blood pressure tablets does the patient take on a daily basis?

2

1

3

4

Correct answer: 2

This question can be solved by dividing 60 by 30.

1. Set up the long division.

2. Calculate 60 ÷ 30, which is 2.

3. Therefore, 60 ÷ 30 = 2.

26.

Brian is a farmer keeping chickens. Each day, he collects 140 eggs. How many trays of eggs does he collect in 6 days, given that one tray carries 30 eggs?

28

84

840

48

Correct answer: 28

Let's find how many total eggs Brian collects in 6 days, since we know he collects 140 eggs each day.

6 × 140 = 840 eggs

Now divide by 30, since there are 30 eggs per tray.

840/30 = 28 trays

27.

What is sixty-five percent expressed as a fraction?

13/20

65/10

1/65

5/24

Correct answer: 13/20

To turn a fraction into a percent, put the percent over 100.

65% = 65/100

Reduce the fraction.

(65/100) ÷ 5/5 = 13/20

28.

A store offers a 10% discount on two pairs of soccer shoes when any 5 pairs are bought. A soccer club manager bought 20 pairs. If the cost of one pair of shoes is $60, find the total amount paid for the shoes.

$1,152

$2,280

$1,188

$1,170

Correct answer: $1,152

Remember that for every 5 pairs of shoes, 2 are given a 10% discount.

Let's find out how many pairs are discounted when the soccer club manager buys 20 pairs.

20/5 = 4 × 2 = 8 pairs are sold at a 10% discount

After the 10% discount, 100% - 10% = 90% of the price is paid.

Now we know that 12 pairs are bought at full price ($60), and 8 pairs are bought at 90% of the price.

(12 × $60) + 8(0.90 × $60) = $720 + $432 = $1,152

29.

Solve the following equation:

|4 – (12 ÷ | 5-7 |)|

2

-4

4

0

Correct answer: 2

Solve the problem from the inside out by starting with the innermost absolute value signs.

|4 – (12 ÷ | 5-7 |)|

Subtract 5 - 7.

|4 – (12 ÷ | -2 |)|

The absolute value of -2 is 2.

|4 – (12 ÷ 2)|

Perform the function within parentheses.

|4 – 6|

Solve.

| -2 |

The absolute value of -2 is 2.

30.

How many ounces are in 19.02 pints?

304.32 ounces

152.16 ounces

76.08 ounces

8.01 ounces

Correct answer: 304.32 ounces

There are 16 ounces in one pint; therefore, there are 304.32 ounces in 19.02 pints (16 × 19.02 = 304.32).

31.

The average rate of consumption of oil by the US in 2005 was around 56.4 million barrels in three days, while that of China was 19.6 million barrels in two days. Express the consumption of China as a percentage of that of the US.

52%

35%

48%

65%

Correct answer: 52%

First let's find out how many barrels each country consumes per day.

USA: 56.4 million barrels in 3 days = 56.4/3 = 18.8 million barrels per day

China: 19.6 million barrels in 2 days = 19.6/2 = 9.8 million barrels per day

To find the percentage, divide China's consumption by the USA's.

9.8/18.8 × 100% = 52%

32.

If 240 people can fit in three charter buses, how many people can fit in 5 buses?

- **400**
- 320
- 480
- 360

Correct answer: 400

To find out how many people can fit in one bus, divide 240 by 3.

240 ÷ 3 = 80

Since we know 80 people can ride in each bus, multiply 80 by 5.

80 × 5 = 400 people

33.

Alice bought a washing machine for $800. However, her friend Rose bought a similar machine by paying a down payment of $250 and six equal monthly installments of $120. How much more did Rose pay for the machine than Alice paid?

$170

$820

$370

$80

Correct answer: $170

Let's find out how much Rose paid, in total, for her washing machine.

Multiply her monthly installments of $120 by 6, then add the down payment of $250.

6 × $120 = $720 + $250 = $970

Subtract to find the difference between what the two women paid.

$970 - $800 = $170

34.

Which of the following is equal to the square root of seventy-two?

6√2

36√2

2√6

12√6

Correct answer: 6√2

The square root of seventy-two can be written as √72. To solve this problem, try to find a factor of 70 that is a square number.

36 × 2 = 72 (36 is a square of 6, since 6 × 6 = 36)

Write 72 as a product of its factors, 36 and 2, and then take the square root of each factor.

√72 = √36 × 2 = √36 √2

The square root of 36 is 6, and the square root of 2 isn't a whole number, so the answer is 6√2.

35.

Judy walked a total of 35 miles in a 5-day period. How many miles did Judy walk on average each day?

7 miles

4 miles

8 miles

3 miles

Correct answer: 7 miles

This problem can be solved by dividing 35 by 5.

1. Set up the long division.

2. Calculate 35 ÷ 5, which is 7.

3. Therefore, 35 ÷ 5 = 7.

36.

Tom works in a daycare center with three-, four-, and five-year-old children. The total enrollment at the center is 30 children. If two out of five children are five years old, how many children are five years of age?

12

10

6

15

Correct answer: 12

This problem can be solved using ratios. If two out of five children are five years old, the ratio used to solve the problem is 2:5. In the following equation used to solve the problem, x represents the unknown number of children who are five years old:

2/5 = x/30

Cross multiply: 5x = 2 × 30

5x = 60

x = 60/5

x = 12

Twelve children are five years old.

37.

A water tank can hold 372 gallons of water. It is a quarter empty and has to supply water to 7 families. If each family must get 30 gallons, what amount of water will remain in the tank?

69 gallons

117 gallons

210 gallons

93 gallons

Correct answer: 69 gallons

If the tank is a quarter empty, then it is three-quarters full. Multiply to find the amount of water in the tank.

3/4 × 372 = 279 gallons

Each family gets 30 gallons, so multiply to find the total number of gallons.

30 gallons × 7 families = 210 gallons

Subtract to find how much is left.

279 - 210 = 69 gallons

38.

A club has an estimated 4,200 members. A third of the members are children, 4/7 of the remainder are women, while the rest are men. Find the number of adult men who are members of the club.

1,200

2,800

1,400

1,800

Correct answer: 1,200

Total number of members = 4,200

1/3 of the members are children, so 4,200 × 1/3 = 1,400 children

Subtract the number of children from the number of members.

4,200 - 1,400 = 2,800

Of the number of adult members, 4/7 are women.

2,800 × 4/7 = (2,800 × 4)/7 = 1,600

Subtract the number of women from the total number of adults

2,800 - 1,600 = 1,200

There are 1,200 adult men who are members of the club.

39.

How many feet are in 7,224 inches?

602 feet

722.4 feet

903 feet

86,688 inches

Correct answer: 602 feet

There are 12 inches in one foot; therefore, there are 602 feet in 7,224 inches (7,224/12 = 602).

40.

During an experiment in the laboratory to investigate the physical properties of water, frozen water at a temperature of -8 degrees Celsius was heated to a temperature of 24 degrees Celsius.

Determine the change in temperature.

32 degrees Celsius

16 degrees Celsius

-16 degrees Celsius

-32 degrees Celsius

Correct answer: 32 degrees Celsius

To determine the change in temperature, subtract the final temperature from the initial temperature.

24 - (-8) = 24 + 8 = 32 degrees Celsius

41.

Harriet, a respiratory therapist, averages 70,000 steps per week as measured on her FitGal pedometer. Some of these steps are taken at work in the hospital and some are taken in Harriet's neighborhood after work each day.

If the ratio of hospital steps to neighborhood steps is 2:7, how many steps does Harriet take at the hospital each week?

20,000

16,000

28,000

60,000

Correct answer: 20,000

The question states that the ratio of hospital steps to neighborhood steps is 2:7 and asks you to calculate the total number of hospital steps. Therefore, you need to first determine the ratio of hospital steps to total steps.

Harriet takes 2 of every 7 steps in total at the hospital.

Hospital Steps : Total steps = 2:7

2/7 x 70,000 = 20,000

Harriet takes 20,000 steps at the hospital each week.

42.

A coin is tossed three times. Find the probability that three heads or three tails appear.

1/4

1/8

3/4

1/2

Correct answer: 1/4

To find the probability that a coin will have the same result (heads or tails) three times in a row, multiply the probability of each possibility three times. Let's pretend we are trying to get heads three times in a row.

On the first toss, the probability of getting heads is 1/2.

On the second toss, the probability of getting heads is again 1/2.

Multiply the probabilities together (1/2 x 1/2) to get 1/4.

On the third toss, the probability of getting heads is again 1/2.

Multiply the probability of getting heads twice (1/4) by 1/2.

1/4 x 1/2 = 1/8

There is a 1 in 8 chance that a coin tossed three times will get heads each time. The same is true for tails.

There is a 1/2 chance that when a coin is tossed three times, the outcomes are HHH, HHT, HTH, HTT, THH, THT, TTH, TTT

The probability of any triplet is 1/8

P(three heads or three tails) is P(HHH) + P(TTT)

This is 1/8 + 1/8 = 1/4

43.

Toby is filling up his pool for the summer. Water from the hose flows into the pool at 5 gallons per minute. The pool holds 20,000 gallons. How long does it take to fill the pool?

66 hours 40 minutes

58 hours 10 minutes

48 hours

18 hours 30 minutes

Correct answer: 66 hours 40 minutes

The water is flowing into the pool at a rate of 5 gallons per minute. Do the math to see how long it takes to get to 20,000 gallons.

20,000 gallons ÷ 5 gallons/minute = 20,000 gallons × 1 minute/5 gallons = 4,000 minutes

To convert to hours, divide by 60 minutes.

4,000 minutes ÷ 60 minutes/hour = 66.67 hours

Convert to hours and minutes.

0.67 hours × 60 minutes/hour = ~40 minutes

Therefore, it takes Toby 66 hours 40 minutes to fill his pool.

44.

Harriet can make an average of 15 wood carvings in three days. Express the number of wood carvings she can make in 3 days as a percentage of those that she can make in 5 days.

60%

36%

33%

20%

Correct answer: 60%

Harriet can do 15 wood carvings in 3 days, so divide to find out how many wood carvings she can make in one day.

15/3 = 5 wood carvings per day

In 5 days, Harriet can make 5 × 5 = 25 wood carvings

To express the number of carvings Harriet can make in 3 days as compared to 5 days, divide 15 by 25.

15/25 = 0.6

To convert to a percentage, multiply by 100

0.6 × 100 = 60%

45.

How many yards are in 5,269 feet?

1,756.33 yards

15,807 yards

1,656.33 yards

1,317.25 yards

Correct answer: 1,756.33 yards

There are three feet in one yard; therefore, there are 1,756.33 yards in 5,269 feet (5,269 ÷ 3 = 1,756.33).

46.

Reuben's surfboard is 2 meters long. How many centimeters long is Reuben's surfboard?

200 centimeters

20 centimeters

2 centimeters

2,000 centimeters

Correct answer: 200 centimeters

There are 100 centimeters in a meter. Use a conversion fraction to solve for x, the unknown number of centimeters in 2 meters:

1/100 = 2/x

Cross multiply: 1x = 100 x 2

x = 200

Reuben's surfboard is 200 centimeters long.

47.

How many pints are in 33 gallons?

264 pints

99 pints

396 pints

132 pints

Correct answer: 264 pints

There are eight pints in a gallon; therefore, there are 264 pints in 33 gallons (8 x 33 = 264).

48.

Samantha is in charge of providing water for the runners in a marathon; 264 runners have signed up for the race. Samantha plans to provide five water stations along the route. If each runner will drink one liter of water during the race, how many kiloliters of water does Samantha need to provide?

0.264 kiloliters

0.0528 kiloliters

2.64 kiloliters

26.4 kiloliters

Correct answer: 0.264 kiloliters

There are 1,000 liters in a kiloliter. Use a conversion fraction to solve for x, the unknown number of kiloliters in 264 liters (each runner drinks one liter):

1/1,000 = x/264

Cross multiply: x = 264/1,000

x = 0.264

Samantha needs to provide 0.264 kiloliters of water.

49.

Jason purchased a 100-count box of black tea bags in order to make ice tea. Jason uses 5 tea bags for each gallon of ice tea he makes. How many gallons of ice tea can Jason make with the box of tea bags that he purchased?

20

5

15

25

Correct answer: 20

This problem can be solved by dividing 100 by 5.

1. Set up the long division.

2. Calculate 10 ÷ 5, which is 2.

3. There is no remainder. Add ending zeroes to the final answer.

4. Therefore, 100 ÷ 5 = 20.

50.

Josie drinks eight pints of water every day. In a week, how many gallons of water does Josie drink?

7 gallons

1 gallon

3.5 gallons

14 gallons

Correct answer: 7 gallons

In a week, Josie drinks 56 pints of water (8 x 7 = 56). There are eight pints in one gallon. Use a conversion fraction to solve for x, the unknown number of gallons in 56 pints:

56/x = 8/1

Cross multiply: 56 = 8x

56/8 = x

x = 7

Josie drinks seven gallons of water per week.

51.

Which of the following is **not** a prime number?

- **27**
- 19
- 3
- 2

Correct answer: 27

A prime number is a whole number that can be divided evenly by itself and by 1, but not by any other number. 27 is not a prime number because it has factors of 1, 3, 9, and 27.

The remaining answer options are incorrect because they are prime numbers. 19, 3, and 2 are only divisible by themselves and 1.

52.

The absolute value of ten minus twelve is what?

2

-2

0

8

Correct answer: 2

The absolute value of ten minus twelve is |10 - 12|. The bars surrounding the equation signify absolute value, which refers to the distance away from zero rather than a negative or positive number. Therefore, since 10 - 12 = -2, the absolute value of -2 is 2.

53.

How many gallons are equal to 50,048 ounces?

391 gallons

319 gallons

782 gallons

728 gallons

Correct answer: 391 gallons

There are 128 ounces in one gallon; therefore, 50,048 ounces is equal to 391 gallons (50,048/128 = 391).

54.

Sally bought four bunnies. In one year, she had 34 bunnies. What is the percentage increase in bunnies?

750%

125%

65%

375%

Correct answer: 750%

To find the increase in the number of bunnies, subtract the final number of bunnies from the initial number of bunnies.

34 - 4 = 30

To find the percentage increase, find the increase in the number of bunnies (30) divided by the initial number (4).

30/4 = 7.5

Multiply 7.5 by 100 to find the percentage.

7.5 × 100 = 750%

55.

Find the next number in the sequence:

2/3, 4/9, 8/27, 16/81...

32/243

16/243

32/81

64/243

Correct answer: 32/243

2/3, 4/9, 8/27, 16/81...

In this sequence, the numerator is multiplied by 2 and the denominator is multiplied by 3.

2/3 x 2/3 = 4/9 x 2/3 = 8/27 x 2/3 = 16/81

Therefore, the next number is:

16/81 x 2/3 = (16 x 2)/(81 x 3) = 32/243

56.

The percentage of girls in a class is 60%. If there are 15 girls, what is the total number of students in the class?

25

9

30

10

Correct answer: 25

The question asks for the total number of students, and we know that 15 represents 60% of the total. Let's set up an equation.

15 is 60% of a number, x, so 15 = 60%(x).

Convert 60% to a decimal by dividing by 100.

15 = 0.60x

x = 25 total students in the class

57.

Landon bought a refrigerator on an installment plan, paying a down payment of $300 and 9 months of equal installments. If she ended up paying a total of $1,074, how much was each installment?

$86

$1,374

$32

$774

Correct answer: $86

The total purchase price is $1,074.

Subtract the down payment of $300 to get $1,074 - $300 = $774.

Since there are 9 months of payments, divide $774 by 9.

$774/9 = $86 per month

58.

How many blueberry muffins can be made from 4 cups of berries if each muffin contains 1/4 cup of berries?

16

12

18

21

Correct answer: 16

In order to solve this problem, divide 4 by 1/4.

4 ÷ 1/4

Flip the fraction upside-down and multiply.

4 × 4/1 = 16

59.

Carmen ordered three prescriptions for one of her patients from the local pharmacy. The pharmacy technician informed Carmen that each prescription had a $12.00 co-pay. How much money will Carmen need in order to pay for the patient's prescriptions?

$36.00

$12.00

$24.00

$48.00

Correct answer: $36.00

This question can be solved by multiplying 3 by $12.00.

1. Set up the long multiplication.

2. Calculate 3 x 2, which is 6.

3. Calculate 3 x 1, which is 3.

4. Calculate 6 + 30, which is 36

5. Place the decimal. 3 has 0 decimal places, and 12 has 0 decimal places. Therefore, the answer should have 0 + 0 = 0 decimal places.

6. Therefore, 3 x 12.00 = 36.00

60.

Car A and Car B are 1/3 mile apart. Car A is moving at 60 miles per hour and Car B is moving at 75 miles per hour. How long will it be before they meet?

0.88 seconds

1.21 seconds

0.25 seconds

0.91 seconds

Correct answer: 0.88 seconds

Use the distance formula to solve this problem.

d = rt, where d is distance, r is rate, and t is time.

Therefore, Car A's distance would be equal to 60t.

Car B's distance would be equal to 75t.

Combine these values into one expression.

60t + 75t = 1/3

Combine like terms and then solve for t.

135t = 1/3

Divide both sides by 135.

t = 1/3 ÷ 135

Flip the second number and multiply.

1/3 × 1/135 = 1/405 hours

Convert hours into minutes:

1/405 hours × 60 minutes/1 hour = 60/405 minutes

Finally, convert 60/405 minutes to seconds:

60/405 minutes × 60 seconds/1 minute = 360/405 seconds

Simplify by dividing the numerator and denominator by 45.

(360 ÷ 45)/(405 ÷ 45) = 8/9 seconds, or 0.88 seconds.

61.

Jill was taking a road trip with her dog Lucy. On Monday, Jill drove 218 miles until she reached their destination. On Tuesday, Jill drove 356 miles to reach their destination. Jill and Lucy didn't travel anywhere on Wednesday, but on Thursday, Jill drove 402 miles to their last destination.

How many total miles did Jill drive?

976 miles

574 miles

620 miles

758 miles

Correct answer: 976 miles

This question can be solved by adding 218, 356, and 402.

1. Set up the long addition.

2. Calculate 8 + 6 + 2, which is 16. Since 16 is two-digit, we carry the first digit 1 to the next column.

3. Calculate 1 + 5 + 0, which is 6. Now add the carry digit of 1, which is 7.

4. Calculate 2 + 3 + 4, which is 9.

5. Therefore, 218 + 356 + 402 = 976.

62.

Eric, Dan, Susan, and Tiffany are standing in a line. In how many different ways can they be arranged?

24

16

8

32

Correct answer: 24

You can solve this by multiplying 4 by each number that precedes it. Since there are 4 people, the expression looks like this:

4 × 3 × 2 × 1 = 24

63.

How many milligrams are in 0.259 grams?

259 milligrams

2,590 milligrams

2.59 milligrams

25.90 milligrams

Correct answer: 259 milligrams

There are 1,000 milligrams in one gram; therefore, there are 259 milligrams in 0.259 grams (1,000 x 0.259 = 259).

64.

Each day of the week, the physician is scheduled to see 32 patients. If the physician charges $250 for each appointment, what is the physician's daily total revenue?

$8,000

$8,200

$7,600

$7,200

Correct answer: $8,000

This question can be solved by multiplying 32 by $250.

1. Set up the long multiplication.

2. Calculate 2 x 5, which is 10. Since 10 is two-digit, we carry the first digit 1 to the next column.

3. Calculate 3 x 5, 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.

4. Bring down the carry digit of 1.

5. Calculate 2 x 2, which is 4.

6. Calculate 3 x 2, which is 6.

7. Calculate 1600 + 6400, which is 8,000.

8. Therefore, 32 x 250 = 8,000.

65.

Silvia took 20 minutes to walk from her home to her classroom. If the classroom is 1,380 feet away, what was her average rate of walking in feet per two minutes?

138 feet in 2 minutes

34.5 feet in 2 minutes

1.15 feet in 2 minutes

69 feet in 2 minutes

Correct answer: 138 feet in 2 minutes

Find the rate of speed Silvia walks to the classroom by dividing distance by time.

1380 feet/20 minutes = 69 feet per minute.

To find the distance she covers in two minutes, multiply by 2.

69 feet/min × 2 = 138 feet per 2 minutes

138 feet in 2 minutes

66.

Zachary's weight increased from 92 pounds to 128 pounds over two years. Determine the total percentage increase in weight.

39%

72%

28%

68%

Correct answer: 39%

To find the percent increase in weight, find the difference between the two weights and divide by Zachary's initial weight.

Initial value: 92 pounds

New value: 128 pounds

Increase: 128 - 92 = 36 pounds

Percentage increase: 36/92 = 0.39

Multiply by 100 to determine the percentage.

0.39 × 100 = 39%

67.

Sharon goes to the mall every 5 days and her daughter, Erin, goes to the mall every 8 days. If Sharon and Erin both go to the mall today, when is the next time they will both go to the mall on the same day?

40 days

15 days

24 days

6 days

Correct answer: 40 days

To solve this problem, you must find the least common multiple of 5 and 8, which is the smallest multiple common for both numbers. To do this, make a list of multiples for each number until at least two multiples are on both lists.

5: 5, 10, 15, 20, 25, 30, 35, 40…

8: 8, 16, 24, 32, 40…

The lowest common multiple of both numbers is 40.

Therefore, the next day both Sharon and Erin will visit the mall on the same day is in 40 days.

68.

Which of the following equals 6 times the product of x and y?

6xy

6(x + y)

6x/y

6x - 6y

Correct answer: 6xy

6 times the product of x and y. 'The product of x and y' means to multiply the two terms together. '6 times' also means to multiply together, so the answer is 6xy.

The remaining answer options are incorrect. 6(x + y) reads '6 times the total of x plus y.' 6x/y reads 'The product of 6 and x divided by y.' 6x - 6y reads 'The product of 6 and x minus the product of 6 and y.'

69.

Approximately how many milliliters are in 5 ounces?

150 milliliters

240 milliliters

400 milliliters

40 milliliters

Correct answer: 150 milliliters

There are approximately 30 milliliters in one ounce; therefore, there are 150 milliliters in 5 ounces (30 x 5 = 150).

70.

Maria buys four pounds of bananas. How many kilograms of bananas did Maria buy?

1.818 kilograms

8.8 kilograms

0.88 kilograms

18.18 kilograms

Correct answer: 1.818 kilograms

There are 2.2 pounds per 1 kilogram. Use a conversion fraction to solve for x, the unknown number of kilograms in 4 pounds:

x/1 = 4/2.2

Cross multiply: 2.2x = 4

x = 4/2.2

x = 1.818

Maria bought 1.818 kilograms of bananas.

71.

A bus leaves a town at an average speed of 40 miles per hour. After two hours, a car leaves the same town, traveling to the same destination as the bus. Given that the car travels for 4 hours before passing the bus, what was the car's average speed?

60 miles per hour

240 miles per hour

46 miles per hour

120 miles per hour

Correct answer: 60 miles per hour

Total time taken by the bus to the spot where it was passed by car is 6 hours.

Since the bus is going 40 miles per hour, in 6 hours the bus travels 6 × 40 = 240 miles. This is equal to the distance traveled by the car.

Distance traveled by the car: 240 miles

Time taken by the car to pass the bus: 4 hours

Average speed of the car: 240/4 = 60 miles per hour

72.

Rusty has a triangular piece of land with a base of 13 miles and a height of 12 miles. He wishes to donate half of this land to the church. What is the size of the land donated to the church?

39 square miles

43 square miles

78 square miles

156 square miles

Correct answer: 39 square miles

To find the area of a triangle, multiply 1/2 × base × height.

1/2 × 13 × 12 = 78 square miles

Rusty wants to donate half of this land, so multiply by 1/2.

1/2 × 78 = 39 square miles

73.

The graph shows the performance of students in the state's exams in different years.

In the year 2012, 24 students took the exams. If in the following year 31 students took the exams, calculate the difference in the total marks attained in the two years.

469

0

517

407

Correct answer: 469

The mean, or average, score in both years is 67.

To find the difference in total marks, find the total scores for all students in each year.

For 2012: 67 × 24 = 1608

For 2013: 67 × 31 = 2077

To find the difference in total marks, subtract.

2077 - 1608 = 469

74.

The local community college awards $500 scholarships to nursing students who maintain a 3.85 GPA or higher. This year, there was a total of 25 nursing students, and 8 of them had a GPA of 3.85 or higher.

How much money did the local community college award in scholarships this year?

$4,000

$3,500

$12,500

$8,500

Correct answer: $4,000

This question can be solved by multiplying $500 by 8.

1. Set up the long multiplication.

2. Calculate 0 x 8, which is 0.

3. Calculate 0 x 8, which is 0.

4. Calculate 5 x 8, which is 40. Since 40 is two-digit, we carry the first digit 4 to the next column.

5. Bring down the carry digit of 4.

6. Therefore, 500 x 8 = 4,000.

75.

Angela ordered office supplies for her unit. She ordered a case of paper for $63.10, a box of pens for $5.76, and a white binder for $4.19. What was the total cost of Angela's office supply order?

$73.05

$78.81

$68.86

$79.95

Correct answer: $73.05

This question can be solved by adding $63.10, $5.76, and $4.19.

1. Set up the long addition.

2. Calculate 0 + 6 + 9, which is 15. Since 15 is two-digit, we carry the first digit 1 to the next column.

3. Calculate 1 + 7 + 1, which is 9. Now add the carry digit of 1, which is 10. Since 10 is two-digit, we carry the first digit 1 to the next column.

4. Calculate 3 + 5 + 4, which is 12. Now add the carry digit of 1, which is 13. Since 13 is two-digit, we carry the first digit 1 to the next column.

5. Calculate 6 + 0 + 0, which is 6. Now add the carry digit of 1, which is 7.

6. Therefore, 63.10 + 5.76 + 4.19 = 73.05.

76.

Simplify:

$$\frac{3!}{6!4!}$$

1/2,880

1/8

1/720

1/6,880

Correct answer: 1/2,880

Factorials are products indicated with an exclamation mark.

3! Is equal to 3 × 2 × 1 = 6

The denominator in this problem is found by calculating the factorials 6! and 4! separately, then multiplying them together.

6! = 6 × 5 × 4 × 3 × 2 × 1 = 720

4! = 4 × 3 × 2 × 1 = 24

720 × 24 = 17,280

Therefore, the answer is 6/17,280. To simplify, divide the numerate and denominator by 6 to get 1/2,880.

77.

A bag full of balloons has 12 green balloons and 6 red ones. If one balloon is selected at random and then a second balloon is selected at random, what are the chances that both balloons will be green?

22/51

2/3

11/18

2/5

Correct answer: 22/51

Find the total number of balloons in the bag.

12 + 6 = 18

There is a total of 18 balloons in the bag, and a chance of 12/18, or 2/3, that the first choice will be green.

There are now 18 - 1 = 17 balloons left in the bag.

Now there is a total of 12 - 1 = 11 green balloons in the bag, and a chance of 11/17 that the second choice will be green.

Multiply the two fractions together.

2/3 × 11/17

Multiply the numerators together separately from the denominators.

(2 × 11)/(3 × 17) = 22/51

There is a 22 in 51 chance that both choices will be green balloons.

78.

A floor with an area of 23,232 square inches is to be tiled using square ceramic tiles that measure 17.6 inches on each side. How many tiles are required to completely tile the floor?

75

330

660

1,320

Correct answer: 75

The area of one tile is 17.6 x 17.6 = 309.76 square inches

The size of the floor is 23,232 square inches.

The number of tiles required is 23,232 ÷ 309.76 = 75

79.

Mr. Smith drives a car with enough room for one driver and three passengers. He needs to transport 14 people from the airport back to his home. How many trips would Mr. Smith need to make to get everyone back to his house?

5

4

2

7

Correct answer: 5

The car can carry three passengers to Mr. Smith's house per trip. Divide the total number of people by the number of passengers per trip.

14 ÷ 3 = 4 2/3 trips

Since Mr. Smith cannot make 2/3 of a trip, the total number of trips he will have to make is

4 + 1 = 5 trips

80.

How many milligrams are in 0.00102 grams?

1.02 milligrams

10.2 milligrams

0.102 milligrams

0.0102 milligrams

Correct answer: 1.02 milligrams

There are 1,000 milligrams in one gram; therefore, there are 1.02 milligrams in 0.00102 grams (1,000 x 0.00102 = 1.02).

81.

How many pounds are in 7,280 ounces?

455 pounds

728.0 pounds

227.5 pounds

404.44 pounds

Correct answer: 455 pounds

There are 16 ounces in one pound; therefore, there are 455 pounds in 7,280 ounces (7,280/16 = 455).

82.

What is the remainder when 7,401 is divided by 7?

2

4

7

1

Correct answer: 2

To find the remainder, find how many times 7 can be divided into 7,401 evenly.

7,401 ÷ 7 = ~1,057

Multiply the answer by 7.

1,057 × 7 = 7,399

Subtract from the original number to find the remainder.

7,401 - 7,399 = 2

Therefore, the remainder is 2.

83.

A 2,624-foot section of the highway is to be provided with security lights on both sides of the road at intervals of 164 feet. If the lights have to be at the 0-foot and 2,624-foot marks too, how many lights are required to be installed on both sides of the road?

34

16

32

17

Correct answer: 34

To find the number of intervals along the road, divide the total distance by the length of each interval.

2,624/164 = 16

Add 1 light, since there is a light at the 0-foot mark.

16 + 1 = 17

Multiply by 2, since there are two sides of the road.

Total number of lights: 2 × 17 = 34 lights

84.

How many centimeters are in 15 meters?

1,500 centimeters

1.5 centimeters

15,000 centimeters

150 centimeters

Correct answer: 1,500 centimeters

One meter is equal to 100 centimeters; therefore, there are 1,500 centimeters in 15 meters (100 x 15 = 1,500).

85.

Find the mean of the following numbers:

21, 36, 47, 50, 67, 79, 81, and 99

60

48

72

66

Correct answer: 60

The mean is the same as the average, which is found by finding the total of all scores and dividing it by the number of scores.

Add the numbers together.

21 + 36 + 47 + 50 + 67 + 79 + 81 + 99 = 480

There are 8 numbers, so divide the total by 8.

480 ÷ 8 = 60

86.

Alison walks to and from work. The distance to work is 5 kilometers. She also walks frequently to a nearby convenience store; the store is located 2 kilometers from her apartment. If Alison works five days per week, how many miles does she walk to and from work every week?

31.07 miles

32.18 miles

43.5 miles

15.5 miles

Correct answer: 31.07 miles

There are 1.609 kilometers in one mile. Since Alison walks both to and from work, she walks a total of 50 kilometers weekly. Use a conversion fraction to solve for x, the unknown number of miles Alison walks in a week:

1.609/1 = x/50

Cross multiply: 1.609x = 50

x = 31.07

Alison walks 31.07 miles to and from work every week.

87.

Which of the following is an integer?

-2

√17

0.75

2/3

Correct answer: -2

Integers consist of positive whole numbers, negative whole numbers, and zero. Therefore, -2 is an integer because it is a negative whole number.

0.75 and 2/3 are not integers because they are not whole numbers. The square root of 17 is not a whole number (~4.12) and therefore not an integer.

88.

An infant is born weighing 5.8 pounds. How many grams does the newborn weigh?

2,636.36 grams

26.36 grams

1,276 grams

12.76 grams

Correct answer: 2,636.36 grams

One gram is equal to .0022 pounds. Use a conversion fraction to solve for x, the unknown number of grams in 5.8 pounds:

5.8/x = .0022/1

5.8 = .0022x

5.8/.0022 = x

x = 2,636.36

The newborn weighs 2,636.36 grams.

89.

William, a long-distance runner, takes three hours to complete a 27-mile race. Given that he runs at a constant speed, how many hours does he take to complete a 12-mile race?

1 1/3 hours

2 hours

1 1/2 hours

6 3/4 hours

Correct answer: 1 1/3 hours

If William takes 3 hours to run 27 miles, divide to find how long he can run in one hour.

27 ÷ 3 = 9 miles per hour

Since William runs at a constant pace of 9 miles per hour, find how long it takes him to run 12 miles.

12 miles ÷ 9 mph = 1 1/3 hours

90.

Megan wrecked her bicycle and had to go to the emergency room. Megan had 2 broken bones and several stitches. She had to have 9 stitches in both of her knees and 6 stitches in both of her hands. In addition, she had to have 8 stitches on her forehead.

How many total stitches did Megan receive?

38

40

23

32

Correct answer: 38

This question can be solved by adding 9, 9, 6, 6, and 8. Megan had stitches in both knees (9 +9 = 18), in both hands (6 + 6 = 12), and in her forehead (8).

1. Set up the long addition.

2. Calculate 8 + 2 + 8, which is 18. Since 18 is two-digit, we carry the first digit 1 to the next column.

3. Calculate 1 + 1 + 0, which is 2. Now add the carry digit of 1, which is 3.

4. Therefore, 18 + 12 + 8 = 38.

91.

Divide:

$(8.1 \times 10^{-6}) \div (9.0 \times 10^{-3})$

9.0×10^{-3}

9.0×10^{-9}

90×10^{9}

7.2×10^{-3}

Correct answer: 9.0×10^{-3}

First, divide the nonexponential terms.

$8.1 \div 9.0 = 0.9$

When dividing, subtract exponents from each other (when multiplying, add the exponents together).

$-6 - (-3) = -3$

Therefore, the answer is 9.0×10^{-3}.

92.

Two masons were laying floor tiles on a 6-foot by 8-foot floor of a house. If they took 8 hours working together, how long would one of them take to do the same job, given that they work at the same rate?

16 hours

32 hours

4 hours

64 hours

Correct answer: 16 hours

Since both masons work at the same rate, we know that one mason would take twice the time.

Multiply the time by 2 to find the answer.

8 hours × 2 = 16 hours

93.

How many quarts are in 97 gallons?

388 quarts

776 quarts

194 quarts

48.5 quarts

Correct answer: 388 quarts

There are four quarts in one gallon; therefore, there are 388 quarts in 97 gallons (4 x 97 = 388).

94.

Four ounces is equal to how many teaspoons?

24 teaspoons

12 teaspoons

48 teaspoons

20 teaspoons

Correct answer: 24 teaspoons

There are three teaspoons in one tablespoon, and two tablespoons in one ounce. This means that there are six teaspoons in one ounce; therefore, there are 24 teaspoons in 4 ounces (6 x 4 = 24).

95.

P and Q are consecutive odd numbers. If P is the lowest odd number more than 20, and P is less than Q, find the sum of P and Q.

44

41

43

40

Correct answer: 44

An odd number is a whole number that cannot be divided by 2 without a remainder. The lowest odd number more than 20 is P = 21. Since two consecutive odd numbers differ by 2:

Q = P + 2 = 21 + 2 = 23

The sum is:

21 + 23 = 44

96.

A park is a rectangular block that is 200 feet by 250 feet in length and width, respectively. If Charles jogs around the perimeter of the park once, how many yards does he cover?

300 yards

600 yards

900 yards

150 yards

Correct answer: 300 yards

Perimeter is equal to two times the length plus two times the width, or 2L + 2W.

The total distance traveled around the block is the perimeter, which is 2(length) + 2(width).

2(200) + 2(250) = 400 + 500 = 900 feet

Set up a proportion to convert feet to yards.

1 yard = 3 feet

x yards = 900 feet

1/3 = x/900

x = (1/3)(900)

x = 300 yards

97.

A cookie recipe calls for 3/4 cup of sugar. If you only have 3/8 cup of sugar, how much more sugar do you need?

3/8 cup

1/4 cup

1/2 cup

3/16 cup

Correct answer: 3/8 cup

In order to solve this problem, subtract the amount you need (3/4 cup) from the amount you have (3/8 cup).

3/4 - 3/8

Make the denominators the same by multiplying 3/4 by 2/2.

(3/4)(2/2) - 3/8

6/8 - 3/8

Subtract the numerators.

6/8 - 3/8 = 3/8 cup

98.

Charlie ran 1/3 mile in 2 1/2 minutes. At this rate, how long will it take him to run 4 miles?

30 minutes

21 minutes

34 minutes

27 minutes

Correct answer: 30 minutes

Since we know Charlie can run 1/3 mile in 2 1/2 minutes, multiply 2 1/2 by 3 to find out how long it takes him to run one mile.

2 1/2 × 3

Convert the mixed fraction to an improper fraction.

5/2 × 3 = 15/2, or 7 1/2 minutes.

Charlie can run one mile in 7 1/2 minutes, so multiply by 4 to find out how long it takes him to run 4 miles.

7 1/2 × 4

15/2 × 4 = 60/2

Simplify.

60/2 = 30 minutes