

What is

$$1\frac{1}{2} \times (-18.80)$$

Use your calculator or turn $1\frac{1}{2}$ into a decimal and multiply. Remember, a positive multiplied/divided by a negative is a negative answer (opposite personalities have a negative relationship).

The answer is -28.2 or as a fraction it is $-28\frac{1}{5}$.

What is the decimal equivalent of $\frac{8}{15}$?

A. 0.53

☒ B. $0.5\bar{3}$

C. $0.\bar{53}$

D. 0.533

You can use your calculator and the convert from fraction to decimal key (2nd and then PRB) or you can do top divided by bottom, or you can do long division.

Katie bought 5 sweaters that each cost the same amount and 1 skirt that cost \$25. The items she bought cost a total of \$225 before tax was added. What was the cost of each sweater?

A. \$20

B. \$35

☒ C. \$40

D. \$45

You can do the math or you can write and solve an equation.

$$\begin{array}{r} 5s + 25 = 225 \\ -25 \quad -25 \\ \hline 5s = 200 \\ \hline 5 \quad 5 \\ s = 40 \end{array}$$

A museum employee surveys a random sample of 350 visitors to the museum. Of those visitors, 266 stopped at the gift shop. Based on these results, about how many people out of 2,300 visitors to the museum would be expected to stop at the gift shop?

Set up two ratios and make them equivalent and then figure out how to go from one ratio to the other. Note-it may not be the nicest number but that is ok!

$$\frac{266}{350} = \frac{?}{2300}$$

So, to go from the first ratio to the second, you multiply by $6\frac{4}{7}$. So multiply 266 by $6\frac{4}{7}$ and you get 1,748.

What is the value of $\left(-\frac{1}{4} - \frac{1}{2}\right) \div \left(-\frac{4}{7}\right)$?

A. $-1\frac{5}{16}$

B. $-\frac{3}{7}$

C. $\frac{3}{7}$

D. $1\frac{5}{16}$

You can use the calculator to do the entire problem or break it into steps and do $-\frac{1}{4} - \frac{1}{2}$ to get $-\frac{3}{4}$ and then divide that by $-\frac{4}{7}$ to get 1.3125 which is $1\frac{5}{16}$.

Convert $\frac{3}{11}$ to a decimal equivalent using long division.

Remember to divide the top by the bottom so you would divide 3 by 11.

$$\begin{array}{r} 0.2727 \dots \\ 11 \overline{) 3.0000} \\ \underline{22} \\ 80 \\ \underline{77} \\ 3 \end{array}$$

Once you get the repeating remainder of 3, you know the decimal is $0.\overline{27}$.

A spinner is divided into four colored sections that are not of equal size: red, blue, purple and orange. The arrow is spun.

SPINNER RESULTS

Color	Number of Times
Red	15
Blue	24
Purple	12
Orange	9

The arrow on the spinner will be spun again. Based on these results, what is the probability that the arrow will land on the purple section?

A. $\frac{1}{4}$

B. $\frac{1}{5}$

C. $\frac{1}{6}$

D. $\frac{1}{12}$

Determine the probability of purple (remember- how many times it lands on purple over how many times the spinner is spun) and then simplify.

$$\begin{aligned} P(\text{purple}) &= \frac{12}{60} \\ &= \frac{1}{5} \end{aligned}$$

Harper has \$15.00 to spend at the grocery store. She is going to buy bags of fruit that cost \$4.75 each and one box of crackers that costs \$3.50.

Write and solve an inequality that models this situation and could be used to determine the **maximum** number of bags of fruit, b , Harper can buy.

Remember an inequality uses $<$, $>$, \leq , or \geq .

$$\begin{aligned} 4.75b + 3.50 &\leq 15 \\ -3.50 &\quad -3.50 \\ \hline 4.75b &\leq 11.5 \\ \underline{4.75} \quad \underline{4.75} & \\ b &\leq 2.42 \dots \end{aligned}$$

So, that is a max of 2 bags.

A recipe requires $\frac{1}{3}$ cup of milk for each $\frac{1}{4}$ cup of water. How many cups of water are needed for each cup of milk?

A. $\frac{1}{12}$

☒ B. $\frac{3}{4}$

C. $\frac{11}{12}$

D. $1\frac{1}{3}$

Set up equivalent ratios for milk to water:

$$\frac{1}{3} : \frac{1}{4}$$

$$1 : \frac{3}{4}$$

To go from $\frac{1}{3}$ of a cup of milk to one whole cup, you have to multiply by 3 so you multiply $\frac{1}{4}$ by 3.

What is $8\frac{7}{12} \times 3 + 17\frac{3}{4}$?

A. $25\frac{3}{4}$

B. $26\frac{1}{4}$

C. $42\frac{1}{4}$

☒ D. $43\frac{1}{2}$

You can use your calculator to do the entire problem or break it into steps and do each part on your calculator. You get an answer of $43\frac{1}{2}$.

The ratio of boys to girls in Mr. Johnson's after-school club is the same as the ratio of boys to girls in Ms. Greene's after-school club. There are 4 boys and 12 girls in Mr. Johnson's club. There are 6 boys in Ms. Greene's club. How many girls are in Ms. Greene's club?

A. 2

B. 12

C. 14

☒ D. 18

Set up equivalent ratios of boys to girls and then simplify that ratio and then determine how many girls.

$$4:12$$

$$1:3$$

$$6:18$$

Leah wants to save money on a new computer. At the store near her, the computer she wants is listed at a regular price of \$400.00.

- On Saturday, the store will have a sale and discount the computer 30%
- Shoppers who buy a computer that same Saturday before 9:00 a.m. will also receive an additional 10% off the sale price

How much will Leah pay, without tax, when she buys the computer that Saturday before 9:00 a.m.?

A. \$148.00

B. \$160.00

C. \$240.00

☒ D. \$252.00

Figure out what the 30% discount is and then figure out what another 10% discount on that new sale price. 30% of \$400 would be $0.30 \times 400 = 120$. So the first discount saves you \$120 so that brings the price to \$280. Then another 10% off of that would be doing: 10% of \$280 would be $0.10 \times 280 = 28$. So that is another \$28 off. So the price is $280 - 28 = 252$. *Remember-having 30% and another 10% off is NOT 40%.

Graham's monthly bank statement showed the following deposits and withdrawals:

−\$25.20, \$52.75, −\$22.04, −\$8.50, \$94.11

If Graham's balance in the account was \$47.86 at the beginning of the month, what was the account balance at the end of the month?

A withdrawal is taking money out (so subtract) and deposit is putting money in (so add). And don't forget to start with \$47.86. So you would do:

$$47.86 - 25.20 + 52.75 - 22.04 - 8.50 + 94.11 = 138.98$$

So the balance would be \$138.98.

Evaluate.

$$\left(-\frac{7}{10} + 0.15\right) \div (-0.125)$$

A. −6.8

B. −4.4

☒ C. 4.4

D. 6.8

You can use your calculator to type in each step or the entire problem. You end up getting that

$$-\frac{7}{10} + 0.15 = -0.55$$

And then divide that by −0.125 and you get 4.4.

Ben earns \$9 per hour and \$6 for each delivery he makes. He wants to earn more than \$155 in an 8-hour workday. What is the **least** number of deliveries he must make to reach his goal?

A. 11

B. 12

C. 13

☒ D. 14

You can either just do the math or set up an inequality and solve. Remember, if he works an 8 hour shift and makes \$9 an hour, he automatically makes \$72.

$$\begin{array}{r} 6d + 72 \geq 155 \\ -72 \quad -72 \\ \hline 6d \geq 83 \\ 6 \quad 6 \end{array}$$

$$d \geq 13.833333 \dots$$

So he has to make at least 14 deliveries since 13 is not enough.

The regular price of an item at a store is p dollars. The item is on sale for 20% off the regular price. Some of the expressions shown below represent the sale price, in dollars, of the item.

Expression A: $0.2p$

Expression B: $0.8p$

Expression C: $1 - 0.2p$

Expression D: $p - 0.2p$

Expression E: $p - 0.8p$

Which two expressions each represent the sale price of the item?

A. Expression A and Expression E

B. Expression B and Expression C

☒ C. Expression B and Expression D

D. Expression C and Expression D

If you have 20% off, that means you are still having to spend 80%. Or you can think of it as 100% of the price minus 20% of the price. So that would be expression B and expression D (note- p is the same thing as $1p$ which is the same thing as saying 100% of p . So $0.8p$ is the same thing as 80% of p).

Sara is playing a board game. The probability that Sara will score a point on her next turn is $\frac{1}{3}$. Which statement describes the probability that Sara will score a point on her next turn?

- A. Likely
- B. Certain
- ☒ C. Unlikely
- D. Impossible

For the probability scale, a probability of 0 means impossible, $\frac{1}{4}$ is unlikely, $\frac{1}{2}$ is equally likely and 1 is certain. Since $\frac{1}{3}$ is less than $\frac{1}{2}$, it is unlikely.

Last week, the price of apples at a grocery store was \$1.60 per pound. This week, apples at the same grocery store are on sale at a 10% discount. What is the total price of $4\frac{1}{2}$ pounds of apples this week?

- A. \$4.77
- ☒ B. \$6.48
- C. \$6.75
- D. \$6.93

First find 10% of 1.60 by doing $0.10 \times 1.60 = 0.16$. So the discount saves you \$0.16 so the new price this week is $1.60 - 0.16 = 1.44$. So if apples are now \$1.44 a pound, you would do $4\frac{1}{2} \times 1.44 = 6.48$. So the price is \$6.48.

An object travels along a horizontal straight path at a constant rate. The object travels $\frac{1}{20}$ of the length of the path in $\frac{3}{4}$ second. At that rate, how many seconds does it take the object to travel the entire length of the path?

- ☒ A. 15
- B. $15\frac{3}{4}$
- C. 20
- D. $20\frac{3}{4}$

Set up equivalent ratios or think about going from $\frac{1}{20}$ of the length to the entire length would be done by multiplying by 20 so you would want to do $\frac{3}{4} \times 20 = 15$. So it would take 15 seconds.

A store sold 650 bicycles last year. This year the store sold 572 bicycles. What is the percent decrease in the number of bicycles sold from last year to this year?

- ☒ A. 12%
- B. 14%
- C. 78%
- D. 88%

To find the percent decrease, first figure out how many fewer bikes were sold this year compared to last year by doing $650 - 572 = 78$. So it is 78 fewer bikes out of the original (your whole) 650 bikes sold. So then you would divide 78 by 650 and convert that decimal to a percent (move the decimal two places to the right since we are thinking of it being out of 100. So you would get $78 \div 650 = 0.12$ which is 12%.