

1. Use a formula

$$I = Prt$$

Remember this formula and all of its parts?

Simple Interest earned = Principle \cdot interest rate \cdot time

If you earned \$540 in interest over the last five year from an account that yielded 3%, how much did you have invested in the account at the start?

2. Use a formula

A forager honeybee spends about 3 weeks becoming accustomed to the immediate surroundings of its hive, and then **the rest of its life** collecting pollen and nectar. A forager's flight muscles can last only about 500 miles - after that the bee dies (wildlife biology can seem sad, yes?).

The total number of miles, T , a forager can fly in its lifetime, L (in days), can be modeled by

$$T = m(L - 21)$$

Where m is the number of miles it flies each day. A hardworking forager honeybee can fly about 55 miles each day. About how long will it live?

3. Use a formula

There are two cell phone plans where T = total cost, m = minutes used, and d = data used in GB.

Plan A: $T = 0.1m + 10d$

Plan C: $T = 0.05m + 15d$,

If you have \$80 to spend and you use 300 minutes, which plan gets you the most data?

4. Conversion

Please convert **13 Larks** to **Zappos** with the table below.

Equivalency	Table
3 Larks	2 Emms
6 Ohns	24 Wags
4.5 Emms	0.5 Zappos
1 Wags	2.5 Jaid

5. Conversion

Please convert **8.5 Jaid**s to **Ohns** with the table below.

Equivalency	Table
3 Larks	2 Emms
6 Ohns	24 Wags
4.5 Emms	0.5 Zappos
1 Wags	2.5 Jaids

6. Conversion

1 kilogram is 2.2 pounds and 2000 pounds is 1 ton.
How many kilograms are in 7 tons?

7. Conversion

1 joule is 0.24 calories and 550 calories are in 1 McDonald's Big Mac.
How many joules are in nine McDonald's Big Macs?

8. Percent Problems

On a trip to Salt Lake City you decide to pay a total of \$81.66 for a new pair of Bogs boots. If the sales tax is 4.7%, what was the *original* price of boots?

9. Percent Problems

On a trip to Boise, ID you decide to pay \$68.90 for a new pair of Converse high tops. If the sales tax is 6%, what was the *original* price of shoes?

13. Percent Problems

The price of a North Face ski jacket is \$190. You found a sale for 35% off. How much will you pay for the jacket on sale?

10. Proportion Problems

A frame is 9 in wide and 6 in tall. If it is reduced to a width of 3 in then how tall will it be?

11. Proportion Problems

The currency in Bolivia is the Boliviano. The exchange rate is approximately $\$1 = 8.2$ Bolivianos. At this rate, how many Bolivianos would you get if you exchanged $\$4.50$?

27. Proportion Problems

If three apples cost \$1.65, how many apples can you buy with \$6.05?

28. Proportion Problems

If 2 cups of sugar are needed for 48 cookies, how many cookies could you bake with 5.35 cups of sugar?

12. Comparisons

Container A and container B have leaks. Container A has 800 ml of water, and is leaking 6 ml per minute. Container B has 1000 ml, and is leaking 9.5 ml per minute. How many minutes will it take for the two containers to have the same amount of water?

13. Comparisons

UPS charges \$7 for the first pound, and \$0.20 for each additional pound. FedEx charges \$5 for the first pound and \$0.30 for each additional pound. How many pounds will it take for UPS and FedEx to cost the same?

14. Comparisons

A twelve inch candle and an 18 inch candle are lit at 6pm. The twelve inch candle burns 0.5 inches every hour. The 18 inch candle burns two inches every hour. At what time will the two candles be the same height?

15. Comparisons

The population of Smallville is 11,000 and growing 200 people each year. The population of Gotham City is 58,700, but people are moving away from the crime-ridden city at a rate of 750 per year. How many years will it take for the two cities to have the same population?

16. Write the Equation Intro

The value of e is 6.71 less than three times π .

- Write this statement mathematically.
- Solve for the value of e .

17. Write the Equation Intro

The quotient of a number and 4 is the same as the sum of the number and 5.

- Write this statement mathematically.
- Solve for the value of the special number.

18. Write the Equation Intro

The product of 5 and this special number is the same as twice the difference between fifty-six and the same special number.

- a. Write this statement mathematically.
- b. Solve for the value of the special number.