

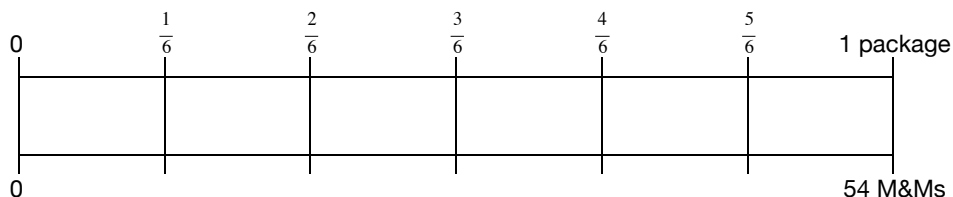
Sketch a double number line to represent each problem. Use your representation to solve the problem.

Each student in Mr. Johnson's fourth grade class opened a package of M&Ms, separated the M&Ms by color, and counted them.

- Haley had a total of 54 M&Ms. One sixth of the M&Ms in the package were red. How many M&Ms were red?

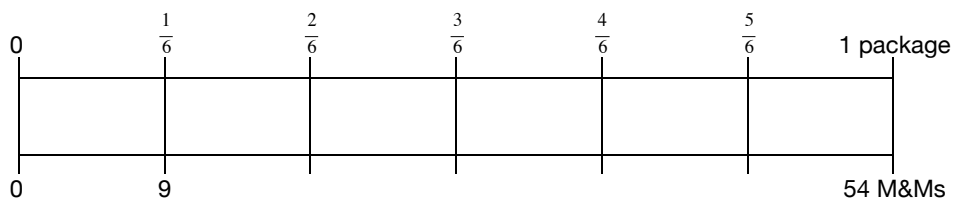
How can you represent the problem with a double number line?

Use the double number line to show one package of M&Ms is equal to 54 M&Ms. Divide both number lines into six equal parts.



How can you use the double number line to solve the problem in a way that makes sense?

One sixth of a package is equal to one sixth of 54. $54 \div 6 = 9$.



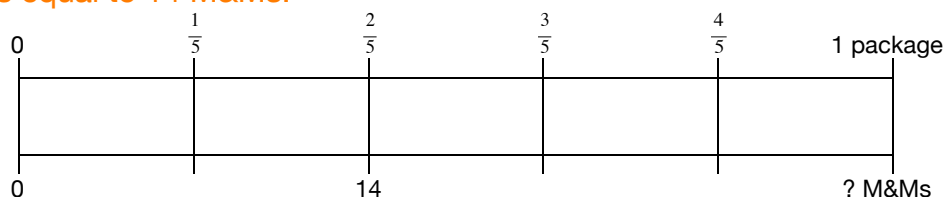
How do you interpret the answer?

There are nine M&Ms in one sixth of the package.

- Sam's package had 14 red M&Ms. Two fifths of his package were red. How many M&Ms were in Sam's package?

How can you represent the problem with a double number line?

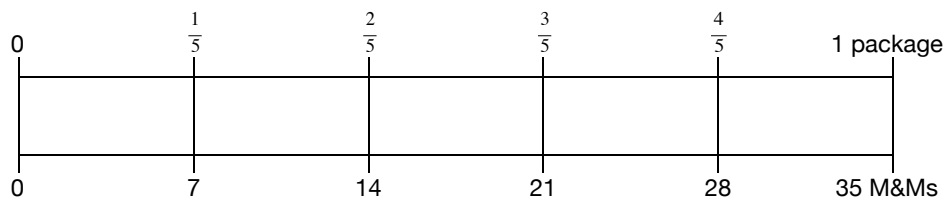
Divide both number lines into five equal parts and show that two fifths of the package is equal to 14 M&Ms.





How can you use the double number line to solve the problem in a way that makes sense?

One fifth of a package is equal to half as much as two fifths of a package. One half of 14 M&Ms is seven M&Ms. If one fifth of a package equals seven M&Ms, then a full package is equal to 5×7 , or 35 M&Ms.



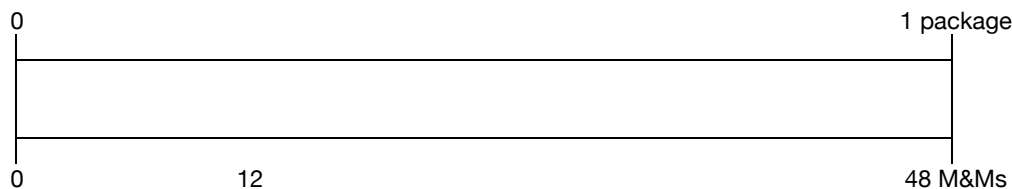
How do you interpret the answer?

Sam's package contained 35 M&Ms.

3. Alex found 12 red M&Ms out of a total of 48. What fraction of Alex's M&Ms were red?

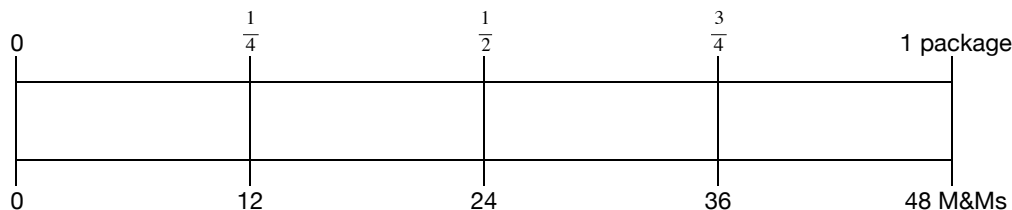
How can you represent the problem with a double number line?

The double number line shows that the whole package of M&Ms is equal to 48 M&Ms. Estimate where to place 12 M&Ms.



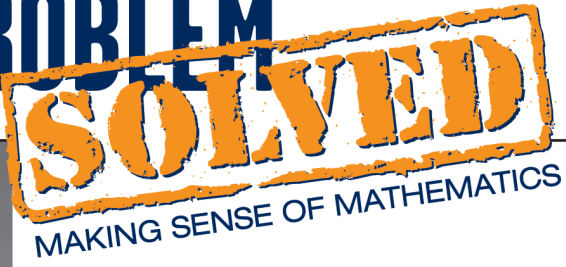
How can you use the double number line to solve the problem in a way that makes sense?

You want to find the fraction that is equal to 12 out of 48 M&Ms. Since $48 \div 12 = 4$, divide each number line into four equal parts. Twelve is one fourth of 48.



How do you interpret the answer?

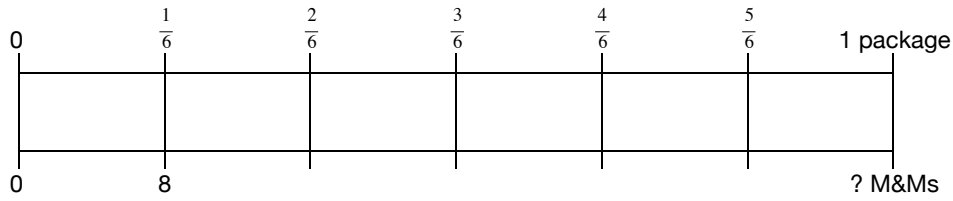
One fourth of Alex's M&Ms are red.



4. Mia ate all but the eight green M&Ms in her package. If one sixth of the M&Ms in Mia's package were green, how many M&Ms were in her package?

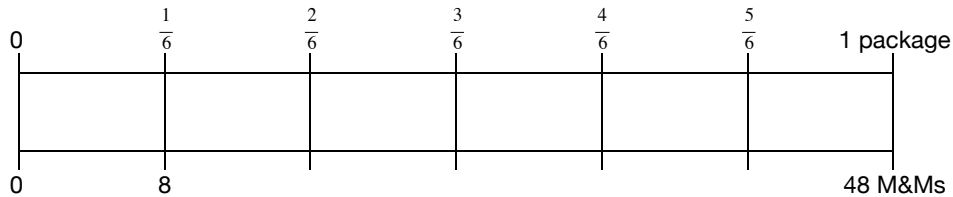
How can you represent the problem with a double number line?

Use the double number line to show that one sixth of a package is equal to eight M&Ms.



How can you use the double number line to solve the problem in a way that makes sense?

If one sixth of the package equals eight M&Ms, then the entire package is equal to 6×8 , or 48 M&Ms.



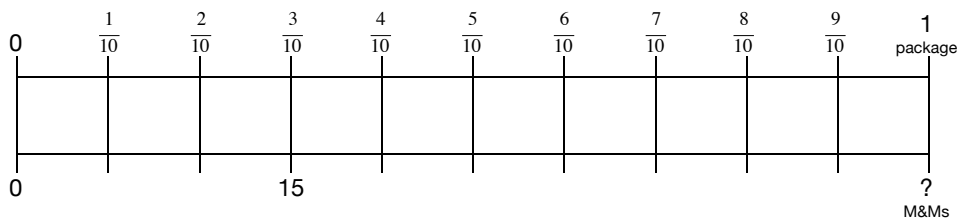
How do you interpret the answer?

Mia's package contains 48 M&Ms.

5. Three tenths of Sam's package were red M&Ms. He had 15 red M&Ms. How many M&Ms were in Sam's package?

How can you represent the problem with a double number line?

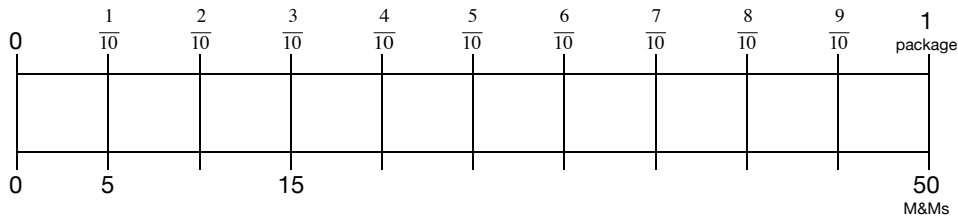
Divide both number lines into 10 equal parts and show that three tenths equals 15 M&Ms.





How can you use the double number line to solve the problem in a way that makes sense?

Three tenths of the package is equal to 15 M&Ms, so one tenth of a package is equal to one third as much, or five M&Ms. If one tenth of a package equals five M&Ms, then a full package is equal to 10×5 , or 50 M&Ms.



How do you interpret the answer?

Sam's package contains 50 M&Ms.