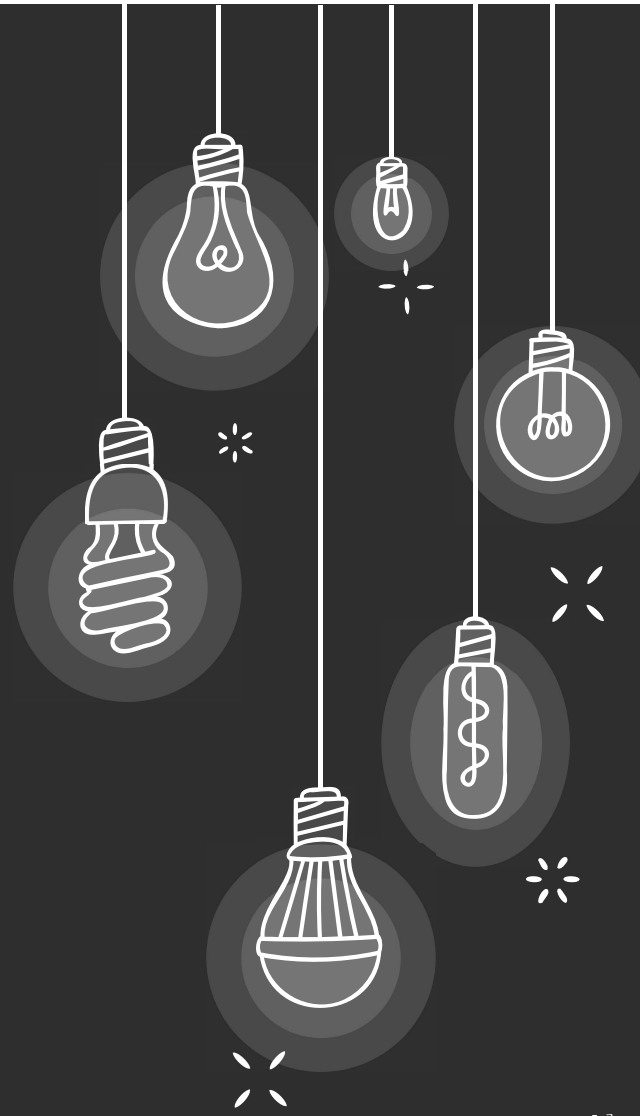
What are we going to do Today?

Play Around with Algebraic Expressions

Word Problem



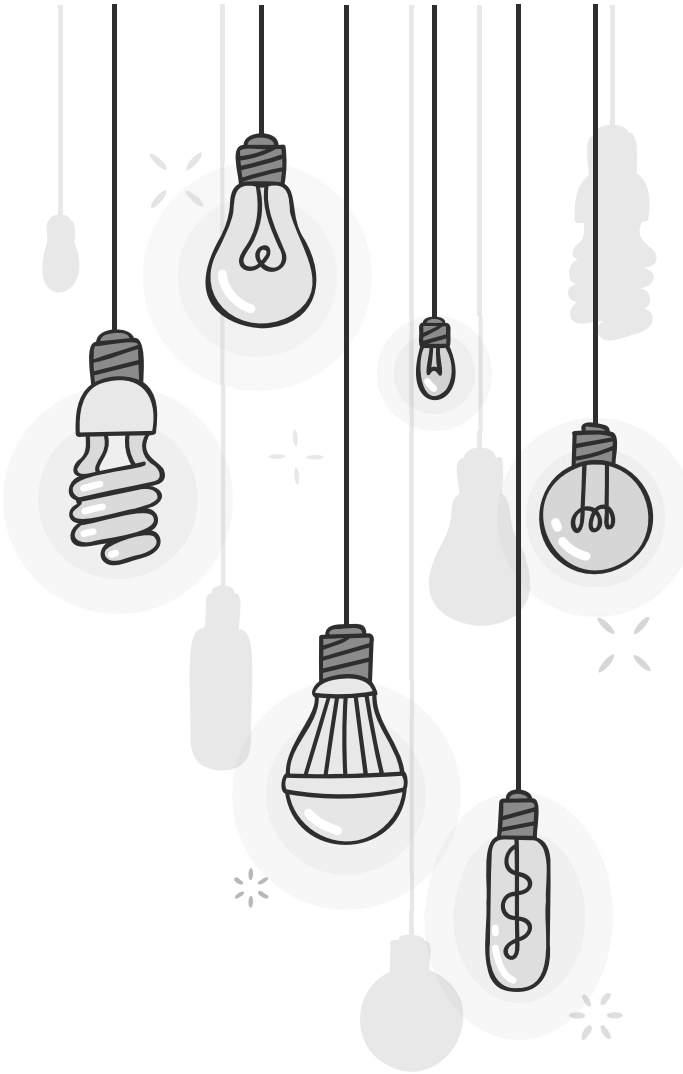
Decoding word problems

The first difficulty for word problems is forming an equation.

(The second difficulty is solving the equation).

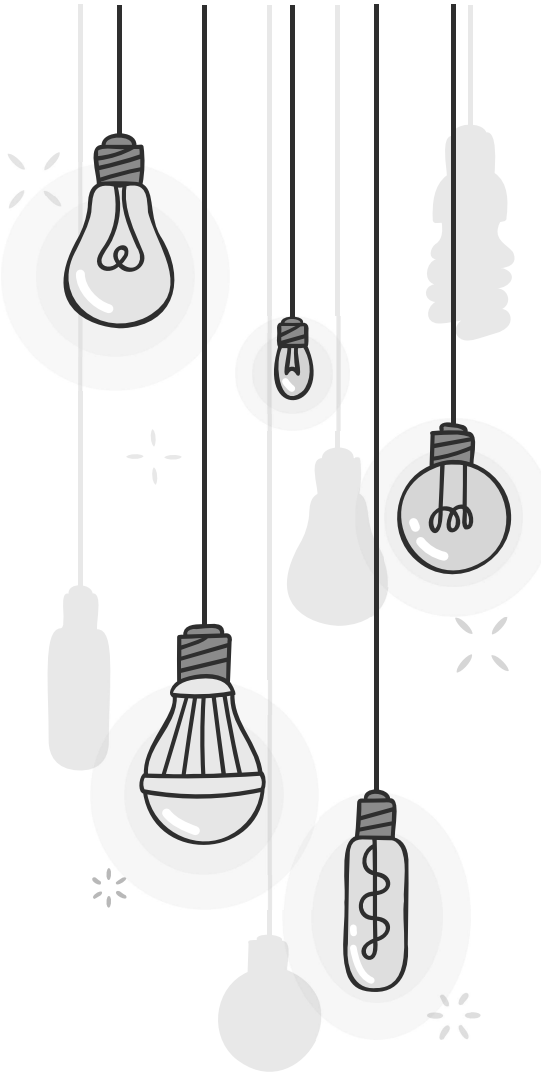
We need to translate a word problem into an algebraic equation:

1. Extract quantitative relationships, using words;
2. See, if the some “words” can be replaced by numbers;
3. Those cannot be replaced by numbers, give them some shot alphabet for the sake of simplicity.



If 6 is added to three times a girl's age the result is 45. Suppose the girl's age is x.

1. **Quantitative Relationship in words**
2. **Replace some numbers in?**



If 6 is added to three times a girl's age the result is 45. Suppose the girl's age is x.

a Which one of these equations is correct?

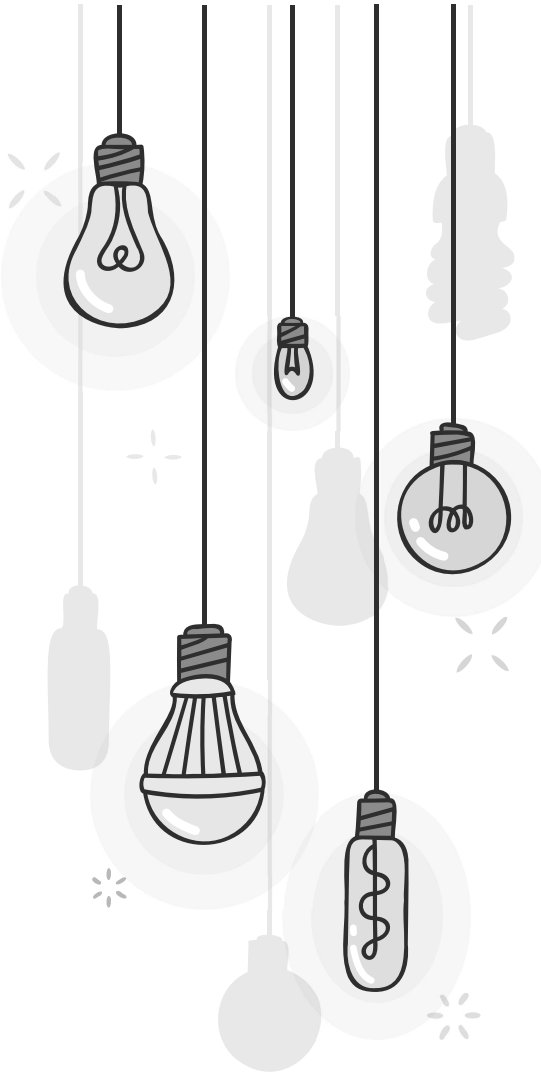
(A) $3x + 45 = 6$

(B) $3x + 6 = 45$

(C) $6x + 3 = 45$

(D) $6x + 45 = 3$

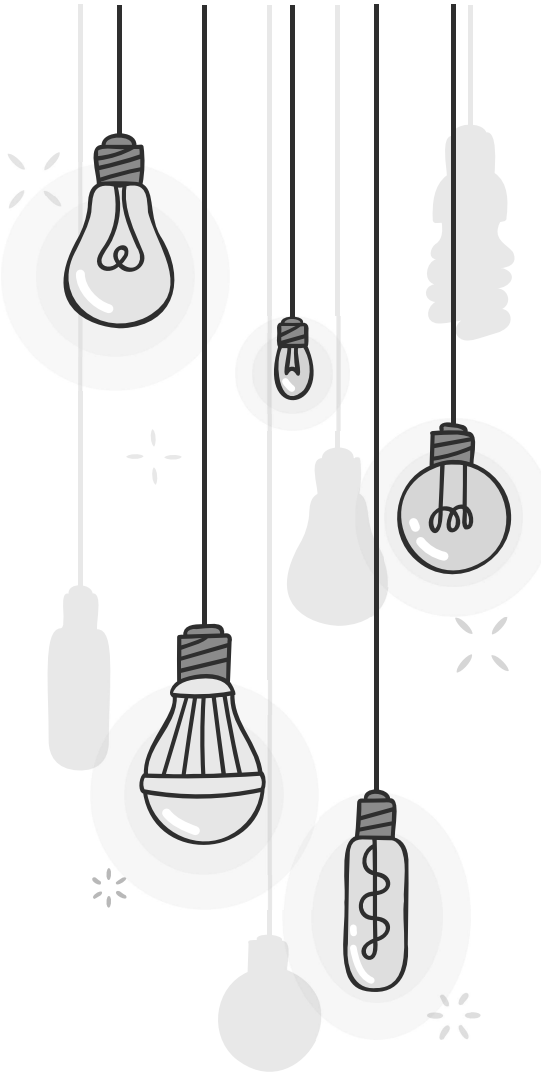
b Work out the girl's age.



If 5 is subtracted from twice Karl's age the result is 11.

a Write this as an equation.

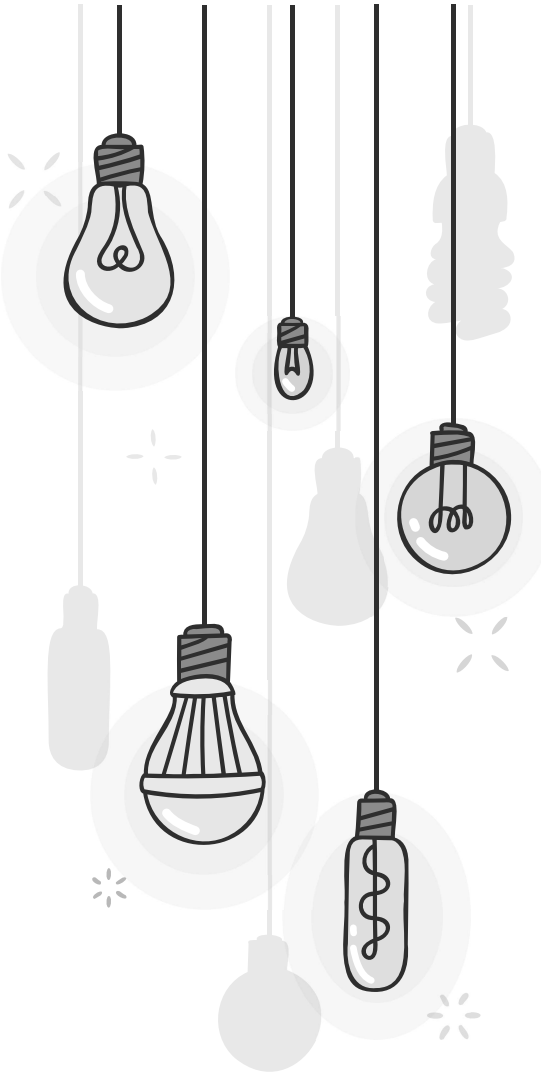
b Solve the equation to work out Karl's age.



Monica paid for six movie tickets with a $100 note. She received $22 in change. Suppose the cost of a ticket is $\$x$.

a Write this information as an equation.

b Solve the equation.



A plumber charges $90 per hour for labour, plus a call-out fee of $40. When he repaired my leaking tap he charged $175. Write down an equation and solve it to work out how long the plumber took to make the repair.