Simplifying Expressions

Simplify these four expressions.

(a) \((3x + 4y) + 2(x + 2y)\)
(b) \(4(2x + 5y) - 3(x + 4y)\)
(c) \(3(2x + 3y) - (x - y)\)
(d) \(3(x + 3y) + (2x - y)\)

Which one is the odd one out?

If you finish, try to make up some more that fit the pattern.

The answer is “5x + 8y”: What’s the question?

5x + 8y is the answer – your job is to make up the questions!

The only brackets that you are allowed to use are:

\((x + y)\) \((x + 2y)\) \((x - 2y)\) \((x + 4y)\) and \((2x + 3y)\)

Pick any two of these brackets and combine them with numbers and + or – to make an expression.

For example, you could pick
- the brackets \((x + 2y)\) and \((x + 4y)\)
- and the numbers 3 and –2

and make

\[3(x + 2y) - 2(x + 4y)\]

... but unfortunately that doesn’t make 5x + 8y.

Can you find a way to make 5x + 8y using two different brackets?

Can you find a way to make 5x + 8y using more than two different brackets?

Can you find a way to make 5x + 8y using all five brackets?