Resource sheet 2.5A

1 For each part of this question, write down an equation to represent the problem, and compare the equation you have written with the equations written by the other members of your group. Then solve the equation that has been written in the most sensible way.

  a Alberto thinks of a number. He multiplies it by 5 then adds 1 to the result.
     The answer is 26. What number did Alberto think of?

  b Bim thinks of a number. He multiplies it by 5 then subtracts 4 from the result.
     The answer is 6. What number did Bim think of?

  c Caroline thinks of a number. She divides it by 10 then adds 3 to the result.
     The answer is 11. What number did Caroline think of?

  d Dianne thinks of a number. She divides it by 4 then subtracts 8 from the result.
     The answer is 2. What number did Dianne think of?

  e Ewen thinks of a number. He multiplies it by 3 then subtracts 5 from the result.
     The answer is the same as the number plus 3. What number did Ewen think of?

  f Francis thinks of a number. She multiplies it by 2 then adds 4 to the result.
     The answer is the same as 4 times the number, minus 8. What number did Francis think of?

  g Gabbi thinks of a number. She adds 4 then multiplies the result by 5.
     The answer is the same as 10 times the number, add 5. What number did Gabbi think of?

  h Hiromni thinks of a number. She subtracts 5 then multiplies the result by 3. The answer is the same as subtracting 6 from the number then multiplying the result by 6. What number did Hiromni think of?

2 Write a question (similar to those in question **1**) that would represent each of these equations.

  a $3n + 4 = 10$

  b $10n - 30 = 10$

  c $\dfrac{n}{3} + 8 = 10$

  d $\dfrac{n}{5} - 1 = 2$

  e $2(n - 3) = n + 4$

  f $3(n + 5) = 5n - 5$

  g $10(n + 2) = 5(n + 6)$

3 Solve each of the equations in question **2**.

4 Invent five of your own questions, similar to those in question **1**.

5 Exchange the questions you wrote for question 4 with another learner from your group. Solve each other's questions.