SOLVING QUADRATIC EQUATIONS

Name:

BAM Indicator: Solve quadratic equations by factorising

1. Solve the following equations by factorising: **F**

a) $x^2 + 3x = 0$

b) $x^2 - 3x + 2 = 0$

c) $x^2 - 49 = 0$

d) $x^2 - 6 = 5x$

e) $3x^2 - 18x - 21 = 0$

2. Melanie says that the solutions to $x^2 - 5x + 4 = 0$ are x = -4 and x = -1. **M**
   Explain why she is wrong.

3. Jane and Elliot each choose a whole number. **P**

   Jane multiplies her number by three and subtracts 2.
   Elliot multiplies his number by 2 and adds 3.
   When they multiply their results together, the product is 110.

   They both chose the same number to start with. What was their number?

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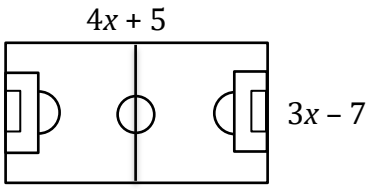
4. This football pitch has an area of 7140 m^2.



a) Show that $12x^2 - 13x - 7175 = 0$ **A**

b) Find the values of p and q given that $12x^2 - 13x - 7175 = (x - p)(qx + 287)$.

c) Find the dimensions of the pitch. **R**

5. How many solutions are there to the equation $x^2 + 12x = -36$?

Overall, I think my success level is:	Low ○ ○ ○ ○ High

F = Fluency R = Reasoning P = Problem-solving A = Application M = Misconception

Q	**SOLVING QUADRATIC EQUATIONS**	☺	☹
	I can solve a quadratic where the coefficient of x^2 is 1		
	I can solve a quadratic where the coefficient of x^2 is greater than 1		
	I know I may have to rearrange a quadratic to be able to solve it		
	I recognise and can use the difference of two squares		
	I can identify quadratics that cannot be solved by factorising.		

Improvements I could make:

Mathematical presentation	Method	Accuracy	Units

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