

Risp 11: Remainders

Pick any two integers, call them a and b ,
so that $a - b > 12$.

Now pick any polynomial expression $f(x)$
with integer coefficients.

A quadratic or cubic to start with...

What is the remainder when you divide $f(x)$ by $x - a$?
[Call this R_a]

What is the remainder when you divide $f(x)$ by $x - b$?
[Call this R_b]

And what is the remainder
when you divide $R_a - R_b$ by $a - b$?

Can you make a conjecture here?

Can you test this?

Can you prove it?

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