Friday questions week 2

1. Consider an array `int a[10]` and a pointer `int* p`. After the statement:

   ```
   p = &a[2];
   ```

   What does `p + 2` mean?

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2. Continued from previous question: what does `p[2]` mean?

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3. If we also have `int* q = &a[5]`, what does `q - p` mean?

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4. How can you allocate memory for a matrix of `double` elements when the number of rows and columns is unknown at compile-time and you wish to be able to use e.g. `a[i][j]` notation?

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5. Continued from previous question: if you want to perform only one call to `malloc/calloc`, how can you then solve the problem?

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6. Which potential risks are there with using `realloc`?

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7. A macro can have parameters. Why is it a bad idea to define a macro `square` as:

   ```
   square(a)    a*a
   ```

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