1. A triangle has sides 2x – 5, 3x + 1, and 4x + 2. Find the polynomial that represents its perimeter.

|  |  |  |
| --- | --- | --- |
|  |  | (2x – 5)(3x + 1)(4x + 2) |
|  |  | 24x – 10 |
|  |  | 9x – 2 |
|  |  | 10x – 8 |

2. A triangle has sides 2x – 5, 3x + 1, and 4x + 2. Find the polynomial that represents its perimeter.

|  |  |  |
| --- | --- | --- |
|  |  | 9x – 2 |
|  |  | (2x – 5)(3x + 1)(4x + 2) |
|  |  | 10x – 8 |
|  |  | 24x – 10 |

3. Divide x3 + 2 x2 + x +12 by ( x - 3)

|  |  |  |
| --- | --- | --- |
|  |  | x2 – x + 4 |
|  |  | x2 – x + 4 rem 24 |
|  |  | x2 + 5x + 16 rem 60 |
|  |  | x2 + 5x + 16 rem -36 |

4. Multiply. (m – 3n)(m + 3n)

|  |  |  |
| --- | --- | --- |
|  |  | m2 – 6mn + 9n2 |
|  |  | m2 + 6mn – 9 n2 |
|  |  | m2 – 9 n2 |
|  |  | m2 + 9 n2 |

5. Divide x3 + 2 x2 + x +12 by ( x + 3)

|  |  |  |
| --- | --- | --- |
|  |  | x2 – x + 4 |
|  |  | x2 + x + 4 |
|  |  | x2 – x - 4 |
|  |  | x2 + x - 4 |

6. Simplify 3x2 – x [ 4 – 3 ( x – 4 )] (Show all work)

7. Multiply as required and collect terms  
( x – 4)(2x2 + 4) + ( x + 4)(x3 – 1) – ( x2 – x – 1) ((Show all work)

8. Divide 5x3 – 5x + 1 by x – 3 (EXPLAIN WHAT YOU ARE DOING)

9. Multiply out ( x + 6 )( x3 – x2 – 5x + 1 ) (Show all work)

10. Consider the following diagram. Express the area of the plane figure shown below as a polynomial. **EXPLAIN!!**   
