

Name : _____

Dividing Polynomials

Sheet 3

- 1) The area of a kite is $h^4 + 7h^3 - 5h^2 - 41h - 42$. If one of the diagonals measures $h + 7$, determine the length of the other diagonal.

- 2) The length and height of a rectangular prism are $a + 3$ and $a - 2$ respectively. If the volume is $4a^3 + 4a^2 - 24a$, determine the width of the rectangular prism.

- 3) The area of a triangle is $x^3 - 4x^2 + 3x$ and the height of the triangle is $x^2 - 4x + 3$, what is the length of the other diagonal, if the area is $4a^3 + 4a^2 - 24a$.

- 4) One of the diagonals of a rectangle is $2x^2 + 5x + 3$ and the length of the other diagonal is $x^2 - 4x + 3$, what is the area of the rectangle.

- 5) The area of a parallelogram is $4m^3 + 28m^2 - 6m - 42$. If the base is $4m^2 - 6$, determine the height of the parallelogram.

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Dividing Polynomials

- 1) The area of a kite is $h^4 + 7h^3 - 5h^2 - 41h - 42$. If one of the diagonals measures $h + 7$, determine the length of the other diagonal.

$$2h^3 - 10h - 12$$

- 2) The length and height of a rectangular prism are $a + 3$ and $a - 2$ respectively. If the volume is $4a^3 + 4a^2 - 24a$, determine the width of the rectangular prism.

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- 3) The area of a triangle is $2x^3 - 15x^2 + 18x - 7$ and the height of the triangle is $x^2 - 4x + 3$, what is the length of the other diagonal?

- 4) One of the diagonals of a rhombus is $2z + 18$ and the length of the other diagonal is $2z + 18$.

$$2z + 18$$

- 5) The area of a parallelogram is $4m^3 + 28m^2 - 6m - 42$. If the base is $4m^2 - 6$, determine the height of the parallelogram.

$$m + 7$$