

Difference of Two Squares Worksheet

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The formula for the difference of two cubes is: $a^2 - b^2 = (a+b)(a-b)$

Example: $x^2 - 25 = (x+5)(x-5)$ where **a** = x and **b** = 5

Example: $9m^2 - 16p^6 = (3m+4p^3)(3m-4p^3)$
where **a** = 3m and **b** = $4p^3$

Practice Exercises:

1) Factor: $x^2 - y^2$

2) Factor: $g^4 - 49$

3) Factor: $y^6 - 4$

4) Factor: $81d^2 - 64$

5) Factor: $36h^2 - 100b^8$

6) Fill in the missing parts: $\underline{\hspace{1cm}} - y^2 = (m + \underline{\hspace{1cm}})(\underline{\hspace{1cm}} - y)$

7) Fill in the missing parts: $16r^6 - \underline{\hspace{1cm}} = (\underline{\hspace{1cm}} + \underline{\hspace{1cm}})(\underline{\hspace{1cm}} - 3p)$

8) Fill in the missing parts: $4g^2 - 25m^8 = (\underline{\hspace{1cm}} + \underline{\hspace{1cm}})(2g - \underline{\hspace{1cm}})$

9) Fill in the missing parts: $\underline{\hspace{1cm}} - \underline{\hspace{1cm}} = (d + 4z)(d - 4z)$

10) Fill in the missing parts: $\underline{\hspace{1cm}} - \underline{\hspace{1cm}} = (3r + 2k^2)(\underline{\hspace{1cm}} - \underline{\hspace{1cm}})$

Difference of Two Squares Worksheet Answers

1) $x^2 - y^2 = (x + y)(x - y)$

2) $g^4 - 49 = (g^2 + 7)(g^2 - 7)$

3) $y^6 - 4 = (y^3 + 2)(y^3 - 2)$

4) $81d^2 - 64 = (9d + 8)(9d - 8)$

5) $36h^2 - 100b^8 = (6h + 10b^4)(6h - 10b^4)$

6) $m^2 - y^2 = (m + y)(m - y)$

7) $16r^6 - 9p^2 = (4r^3 + 3p)(4r^3 - 3p)$

8) $4g^2 - 25m^8 = (2g + 5m^4)(2g - 5m^4)$

9) $d^2 - 16z^2 = (d + 4z)(d - 4z)$

10) $9r^2 - 4k^4 = (3r + 2k^2)(3r - 2k^2)$