



## Polynomial Algebra - Difference of Exponents (Variables) Divided by Second Exponent - Solve

1 Find the value of z without using a calculator

$$\frac{z^{2001} + z^{2000}}{z^{2000}} = 12$$

- |   |        |   |        |
|---|--------|---|--------|
| A | z = 1  | B | z = 17 |
| C | z = 11 | D | z = 2  |
| E | z = 7  | F | z = 9  |

2 Find the value of r without using a calculator

$$\frac{r^{2021} - r^{2020}}{r^{2020}} = 20$$

- |   |        |   |        |
|---|--------|---|--------|
| A | r = 23 | B | r = 35 |
| C | r = 37 | D | r = 21 |
| E | r = 25 | F | r = 15 |

3 Find the value of y without using a calculator

$$\frac{y^{2022} - y^{2021}}{y^{2021}} = 12$$

- |   |        |   |        |
|---|--------|---|--------|
| A | y = 15 | B | y = 8  |
| C | y = 13 | D | y = 5  |
| E | y = 10 | F | y = 12 |

4 Find the value of n without using a calculator

$$\frac{n^{2012} + n^{2011}}{n^{2011}} = 22$$

- |   |        |   |        |
|---|--------|---|--------|
| A | n = 31 | B | n = 15 |
| C | n = 39 | D | n = 21 |
| E | n = 33 | F | n = 37 |

5 Find the value of p without using a calculator

$$\frac{p^{2009} - p^{2008}}{p^{2008}} = 6$$

- |   |        |   |        |
|---|--------|---|--------|
| A | p = 11 | B | p = 3  |
| C | p = 12 | D | p = 1  |
| E | p = 7  | F | p = 14 |

6 Find the value of n without using a calculator

$$\frac{n^{2017} - n^{2016}}{n^{2016}} = 15$$

- |   |        |   |        |
|---|--------|---|--------|
| A | n = 11 | B | n = 23 |
| C | n = 6  | D | n = 13 |
| E | n = 16 | F | n = 21 |

7 Find the value of r without using a calculator

$$\frac{r^{2026} - r^{2025}}{r^{2025}} = 21$$

- |   |        |   |        |
|---|--------|---|--------|
| A | r = 10 | B | r = 6  |
| C | r = 22 | D | r = 20 |
| E | r = 38 | F | r = 8  |

8 Find the value of p without using a calculator

$$\frac{p^{2022} - p^{2021}}{p^{2021}} = 21$$

- |   |        |   |        |
|---|--------|---|--------|
| A | p = 22 | B | p = 2  |
| C | p = 26 | D | p = 40 |
| E | p = 28 | F | p = 34 |