



How Did the Absent-Minded Professor Burn His Ear?

Simplify the expression. Write the letter of the exercise in the box that contains the number of the answer.

Exponents and Exponential Functions:
Simplifying Powers of Monomials

- E** $n^2 \cdot n^5$
- N** $(n^2)^5$
- H** $(n^{-2})^5$
- A** $(n^9)^4 n^3$
- O** $(n^2)(n^3)^{-2}$
- I** $(n^4)^{-3}(n^4)^{-1}$
- E** $(n^{10})^{10}(n^{-8})^3$

- Answers • Part 1
- 29** n^{76} **31** n^{42}
 - 20** n^{81} **18** n^7
 - 33** n^{10} **5** n^{39}
 - 27** $\frac{1}{n^4}$ **8** $\frac{1}{n^{16}}$
 - 4** $\frac{1}{n^{12}}$ **22** $\frac{1}{n^{10}}$

- N** $(7d)^2$
- H** $(4d^2)^3$
- S** $(-4d^2)^3$
- A** $(4d^2)^{-3}$
- O** $(-5d)^2(d^3)^2$
- E** $8(d^2)^2(-2d)^3$
- H** $(3d^5)^{-4}(d^{-1})^9$

- Answers • Part 2
- 23** $-64d^7$ **17** $64d^6$
 - 6** $-64d^6$ **30** $25d^{10}$
 - 13** $49d^2$ **10** $25d^8$
 - 9** $\frac{1}{81d^{18}}$ **1** $\frac{1}{81d^{29}}$
 - 32** $\frac{1}{64d^6}$ **12** $\frac{64}{d^9}$

- I** $(x^5y^4)^2$
- N** $(10xy^2)^3(x^2)$
- H** $(-x^3y^8)^3$
- E** $(x^2y)^5(x^2y^5)$
- G** $(9x^3y^4)^2(xy)^{-6}$
- T** $(3x^{-2})^4(x^2y^4)^3$
- W** $(-5y^{-5})^3(-x^4y)^2$

- Answers • Part 3
- 14** $81y^2$ **3** $1000x^6y^2$
 - 12** $x^{10}y^8$ **26** $-x^9y^{24}$
 - 2** $x^{12}y^{10}$ **19** $1000x^5y^6$
 - 16** $\frac{81y^7}{x^4}$ **4** $\frac{125x^8}{y^{13}}$
 - 21** $\frac{81y^{12}}{x^2}$ **25** $\frac{125x^9}{y^{12}}$

- N** $(-6m^7t^4)^2$
- R** $(3m^2t)^2(3m^2t^2)$
- W** $(-2mt)^3(-2mt^3)$
- G** $-m^5t^2(15mt^5)^2$
- N** $(4mt^{-3})^2(-4m^{-3}t)^2$
- P** $(5mt)^2 + 5m^2t^2$
- R** $(mt^4)^{-1}(mt^4)$

- Answers • Part 4
- 25** $30m^2t^2$ **34** $-225m^7t^{12}$
 - 16** $16m^4t^6$ **24** $-225m^6t^{10}$
 - 9** 1 **11** $36m^{14}t^8$
 - 31** $27m^6t^4$ **7** $27m^5t^6$
 - 15** $\frac{256m^2}{t^3}$ **28** $\frac{256}{m^4t^4}$

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