Laws of exponents — A power of a power

Name: _____ Date: _____

Write each power of a power as one power. Give the exponent n.

1. $(9^3)^5 = 9^n$, n = ___

2. $(7^2)^6 = 7^n$, n = ___

3. $(3^5)^7 = 3^n$, n = ___

4. $(8^4)^8 = 8^n$, n = ___

5. $(3^4)^8 = 3^n$, n = ___

6. $(4^1)^2 = 4^n$, n = ___

Laws of exponents · A power of a power — Answer key

1. $(9^3)^5 = 9^{15}$

2. $(7^2)^6 = 7^{12}$

3. $(3^5)^7 = 3^{35}$

4. $(8^4)^8 = 8^{32}$

5. $(3^4)^8 = 3^{32}$

6. $(4^1)^2 = 4^2$