

Algebra I
9.1 Worksheet
Defining Exponents

NAME: _____
DATE: _____ HOUR: _____

Complete the following.

1. $64 = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$
 $= 2^6$

2. $81 = 3 \cdot 3 \cdot 3 \cdot 3$
 $= 3^4$

3. $625 = 5 \cdot$ _____
 $= 5^{\square}$

4. $64 = 4 \cdot$ _____
 $= 4^{\square}$

5. $343 = 7 \cdot$ _____
 $= 7^{\square}$

6. $64 = 8 \cdot$ _____
 $= 8^{\square}$

7. $729 = 9 \cdot$ _____
 $= 9^{\square}$

8. $1296 = 6 \cdot$ _____
 $= 6^{\square}$

9. $169 = 13 \cdot$ _____
 $= 13^{\square}$

10. $50625 = 15 \cdot$ _____
 $= 15^{\square}$

11. $2744 = 14 \cdot$ _____
 $= 14^{\square}$

12. $289 = 17 \cdot$ _____
 $= 17^{\square}$

13. $324 = 18 \cdot$ _____
 $= 18^{\square}$

14. $6859 = 19 \cdot$ _____
 $= 19^{\square}$

15. $400 = 20 \cdot$ _____
 $= 20^{\square}$

16. $1331 = 11 \cdot$ _____
 $= 11^{\square}$

17. $20736 = 12 \cdot$ _____
 $= 12^{\square}$

18. $2197 = 13 \cdot$ _____
 $= 13^{\square}$

19. $4913 = 17 \cdot$ _____
 $= 17^{\square}$

20. $32768 = 8 \cdot$ _____
 $= 8^{\square}$

21. $81 = 9 \cdot \underline{\hspace{2cm}}$
 $= 9^{\square}$
22. $16 = 2 \cdot \underline{\hspace{2cm}}$
 $= 2^{\square}$
23. $243 = 3 \cdot \underline{\hspace{2cm}}$
 $= 3^{\square}$
24. $25 = 5 \cdot \underline{\hspace{2cm}}$
 $= 5^{\square}$
25. $256 = 4 \cdot \underline{\hspace{2cm}}$
 $= 4^{\square}$
26. $49 = 7 \cdot \underline{\hspace{2cm}}$
 $= 7^{\square}$
27. $5832 = 18 \cdot \underline{\hspace{2cm}}$
 $= 18^{\square}$
28. $6561 = 9 \cdot \underline{\hspace{2cm}}$
 $= 9^{\square}$
29. $512 = 2 \cdot \underline{\hspace{2cm}}$
 $= 2^{\square}$
30. $729 = 3 \cdot \underline{\hspace{2cm}}$
 $= 3^{\square}$
31. $15625 = 5 \cdot \underline{\hspace{2cm}}$
 $= 5^{\square}$
32. $1024 = 4 \cdot \underline{\hspace{2cm}}$
 $= 4^{\square}$

33. $2401 = 7 \cdot \underline{\hspace{2cm}}$
 $= 7^{\square}$
34. $4096 = 8 \cdot \underline{\hspace{2cm}}$
 $= 8^{\square}$
35. $361 = 19 \cdot \underline{\hspace{2cm}}$
 $= 19^{\square}$
36. $36 = 6 \cdot \underline{\hspace{2cm}}$
 $= 6^{\square}$
37. $216 = 6 \cdot \underline{\hspace{2cm}}$
 $= 6^{\square}$
38. $125 = 5 \cdot \underline{\hspace{2cm}}$
 $= 5^{\square}$
39. $3375 = 15 \cdot \underline{\hspace{2cm}}$
 $= 15^{\square}$
40. $117649 = 7 \cdot \underline{\hspace{2cm}}$
 $= 7^{\square}$
41. $196 = 14 \cdot \underline{\hspace{2cm}}$
 $= 14^{\square}$
42. $225 = 15 \cdot \underline{\hspace{2cm}}$
 $= 15^{\square}$
43. $8192 = 2 \cdot \underline{\hspace{2cm}}$
 $= 2^{\square}$
44. $6561 = 3 \cdot \underline{\hspace{2cm}}$
 $= 3^{\square}$