Rewriting Using the Laws of Exponents

Name:

Use the law of exponents to rewrite each problem.

1) $(7^4)^2 =$ _____

2) $8^3 \times 8^{-4} =$ _____

3) $(9^5)^9 =$ _____

4) $(\frac{1}{8})^2 =$ _____

5) $8^2 \times 8^7 =$ _____

6) $(4 \times 6)^9 =$ _____

7) $(\frac{1}{9})^9 =$ _____

8) $9^{-8} =$ _____

9) $(8^5)^7 =$ _____

10) $8^0 =$ _____

11) $(9 \times 6)^2 =$ _____

12) $8^0 =$ _____

13) $4^5 \times 4^{-3} =$ _____

14) $7^8 \times 7^4 =$ _____

15) $(5 \times 4)^6 =$ _____

16) $2^1 =$ _____

17) $6^1 =$ _____

18) $7^1 =$ _____

19) $8^8 \times 8^9 =$ _____

20) $2^4 \times 2^{-7} =$ _____

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

1-10	95	90	85	80	75	70	65	60	55	50
11-20	45	40	35	30	25	20	15	10	5	0

Rewriting Using the Laws of Exponents Name: **Answer Key**

Use the law of exponents to rewrite each problem.

1) $(7^4)^2 =$ $7^{4 \times 2}$

2) $8^3 \times 8^{-4} =$ $8^{3 - 4}$

3) $(9^5)^9 =$ $9^{5 \times 9}$

4) $(\frac{1}{8})^2 =$ $\frac{1}{8^2}$

5) $8^2 \times 8^7 =$ $8^{2 + 7}$

6) $(4 \times 6)^9 =$ $4^9 \times 6^9$

7) $(\frac{1}{9})^9 =$ $\frac{1}{9^9}$

8) $9^{-8} =$ $\frac{1}{9^8}$

9) $(8^5)^7 =$ $8^{5 \times 7}$

10) $8^0 =$ 1

11) $(9 \times 6)^2 =$ $9^2 \times 6^2$

12) $8^0 =$ 1

13) $4^5 \times 4^{-3} =$ $4^{5 - 3}$

14) $7^8 \times 7^4 =$ $7^{8 + 4}$

15) $(5 \times 4)^6 =$ $5^6 \times 4^6$

16) $2^1 =$ 2

17) $6^1 =$ 6

18) $7^1 =$ 7

19) $8^8 \times 8^9 =$ $8^{8 + 9}$

20) $2^4 \times 2^{-7} =$ $2^{4 - 7}$

Answers

1. $7^{4 \times 2}$
2. $8^{3 - 4}$
3. $9^{5 \times 9}$
4. $\frac{1}{8^2}$
5. $8^{2 + 7}$
6. $4^9 \times 6^9$
7. $\frac{1}{9^9}$
8. $\frac{1}{9^8}$
9. $8^{5 \times 7}$
10. 1
11. $9^2 \times 6^2$
12. 1
13. $4^{5 - 3}$
14. $7^{8 + 4}$
15. $5^6 \times 4^6$
16. 2
17. 6
18. 7
19. $8^{8 + 9}$
20. $2^{4 - 7}$

1-10	95	90	85	80	75	70	65	60	55	50
11-20	45	40	35	30	25	20	15	10	5	0