Solving Using the Laws of Exponents

Name:

Solve each problem using the laws of exponents.

1) $(2 \times 3)^2 =$ _____ = _____

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

3) $2^2 \times 2^3 =$ _____ = _____

4) $(2^3)^2 =$ _____ = _____

5) $2^{-2} =$ _____ = _____

6) $2^{-2} \times 2^4 =$ _____ = _____

7) $3^1 =$ _____ = _____

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

9) $2^1 =$ _____ = _____

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

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

1-10	90	80	70	60	50	40	30	20	10	0

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

Solve each problem using the laws of exponents.

1) $(2 \times 3)^2 =$ $2^2 \times 3^2$ = 36

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

3) $2^2 \times 2^3 =$ 2^{2+3} = 32

4) $(2^3)^2 =$ $2^{3 \times 2}$ = 64

5) $2^{-2} =$ $1/2^2$ = $\frac{1}{4}$

6) $2^{-2} \times 2^4 =$ 2^{-2+4} = 4

7) $3^1 =$ 3 = 3

8) $3^2 \times 3^{-3} =$ 3^{2-3} = $\frac{1}{3}$

9) $2^1 =$ 2 = 2

10) $(1/2)^4 =$ $1/2^4$ = $\frac{1}{16}$

Answers

1. 36
2. 2
3. 32
4. 64
5. $\frac{1}{4}$
6. 4
7. 3
8. $\frac{1}{3}$
9. 2
10. $\frac{1}{16}$

1-10	90	80	70	60	50	40	30	20	10	0