Name

Apply the power-of-a-product rule

1

Use the power of a product rule to separate this into a product of powers.

$$(5 \cdot 2)^3$$

A $5^6 \cdot 2^6$	B $5 \cdot 2^3$
C $5^3 \cdot 2^3$	D $5^3 + 2^3$
E $5^3 \cdot 2$	

2

Use the power of a product rule to separate this into a product of powers.

$$(mq)^2$$

A $m \cdot q^2$	B $m^2 \cdot q^2$
C $m^2 + q^2$	D $m^4 \cdot q^4$
E $m^2 \cdot q$	

3

Use the power of a product rule to write this as a single power of a product.

$$t^2 \cdot n^2$$

A $(tn)^3$	B $(tn)^4$
C $(t+n)^2$	D $(tn)^2$

4

Use the power of a product rule to separate this into a product of powers.

$$(14)^4$$

A $7 \cdot 2^4$	B $7^8 \cdot 2^8$
C $7^4 \cdot 2^4$	D $7^4 \cdot 2$
E $7^4 + 2^4$	

5

Use the power of a product rule to write this as a single power of a product.

$$7^4 \cdot 2^4$$

A $(9)^4$	B $(14)^4$
C $(14)^8$	D $(14)^5$

6

Use the power of a product rule to separate this into a product of powers.

$$(qw)^3$$

A $q \cdot w^3$	B $q^3 \cdot w$
C $q^6 \cdot w^6$	D $q^3 + w^3$
E $q^3 \cdot w^3$	

7

Use the power of a product rule to separate this into a product of powers.

$$\left(\frac{2}{6} \cdot \frac{3}{4}\right)^2$$

A $\left(\frac{2}{6}\right)^2 \cdot \frac{3}{4}$	B $\left(\frac{2}{6}\right)^2 \cdot \left(\frac{3}{4}\right)^2$
C $\frac{2}{6} \cdot \left(\frac{3}{4}\right)^2$	D $\left(\frac{2}{6}\right)^4 \cdot \left(\frac{3}{4}\right)^4$
E $\left(\frac{2}{6}\right)^2 + \left(\frac{3}{4}\right)^2$	

Name

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8
Use the power of a product rule to write this as a single power of a product.

$$\left(\frac{1}{7}\right)^2 \cdot \left(\frac{3}{7}\right)^2$$

A $\left(\frac{1}{7} \cdot \frac{3}{7}\right)^3$	B $\left(\frac{1}{7} \cdot \frac{3}{7}\right)^4$
C $\left(\frac{1}{7} + \frac{3}{7}\right)^2$	D $\left(\frac{1}{7} \cdot \frac{3}{7}\right)^2$

9
Use the power of a product rule to write this as a single power of a product.

$$r^2 \cdot z^2$$

A $(r+z)^2$	B $(rz)^4$
C $(rz)^3$	D $(rz)^2$

10
Use the power of a product rule to separate this into a product of powers.

$$(35)^3$$

A $5^3 + 7^3$	B $5^6 \cdot 7^6$
C $5^3 \cdot 7$	D $5 \cdot 7^3$
E $5^3 \cdot 7^3$	

11
Use the power of a product rule to write this as a single power of a product.

$$2^3 \cdot 3^3$$

A $(5)^3$	B $(6)^4$
C $(6)^6$	D $(6)^3$

12
Use the power of a product rule to separate this into a product of powers.

$$\left(\frac{3}{7} \cdot \frac{1}{6}\right)^4$$

A $\left(\frac{3}{7}\right)^8 \cdot \left(\frac{1}{6}\right)^8$	B $\left(\frac{3}{7}\right)^4 \cdot \frac{1}{6}$
C $\frac{3}{7} \cdot \left(\frac{1}{6}\right)^4$	D $\left(\frac{3}{7}\right)^4 + \left(\frac{1}{6}\right)^4$
E $\left(\frac{3}{7}\right)^4 \cdot \left(\frac{1}{6}\right)^4$	