



**THIRD SPACE
LEARNING**

Distributing Exponents Worksheet

Algebra

Grades 6 to 8

Skill Questions

Name:

Date:

1 Simplify: $2x^2(3x^3)$

Answer

2 Evaluate: $(-2)^3(-2)^4$

Answer

3 Simplify: $4a^2b^3(2ab^2)$

Answer

4 Evaluate: $(-3)^2 \bullet (-3)^3$

Answer

5 Simplify: $(2x^3y^7)^3$

Answer

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6 Evaluate: $(4a)^3(2a)^2$

Answer

7 Simplify: $(6a^4b^5c)^2$

Answer

8 Evaluate $(-2)^4 \bullet 3^4$

Answer

9 Simplify: $(3x^3y^5)^3(x^6y)$

Answer

10 Evaluate $(-5)^2 \bullet (-5)^3$

Answer

Applied Questions

- 11 A farmer has a rectangular field with dimensions $3x^2$ meters by $4x$ meters. What is the total area of the field?

Answer



- 12 Simplify the expression:

$$(3ab)^2(5a^2)(2a^3b^4)^3$$

Answer



- 13 Write an expression representing the area of square that has side lengths,
 $10x^2y$

Answer



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- 14** A garden has rows of plants, with each row containing $6a$ flowers. If there are $3a^2$ rows, write an expression that represents the total amount of flowers.

Answer

- 15** A manufacturer produces $4z$ units of a product each day. If the production continues for $5z^2$ days, write an expression representing the total amount of products.

Answer

Answers

Question number	Question	Answers	Standard
1	Simplify: $2x^2(3x^3)$	$6x^5$	8.EE.A.1
2	Evaluate: $(-2)^3(-2)^4$	-128	8.EE.A.1
3	Simplify: $4a^2b^3(2ab^2)$	$8a^3b^5$	8.EE.A.1
4	Evaluate: $(-3)^2 \bullet (-3)^3$	-243	8.EE.A.1
5	Simplify: $(2x^3y^7)^3$	$8x^9y^{21}$	8.EE.A.1
6	Evaluate: $(4a)^3(2a)^2$	$256a^5$	8.EE.A.1
7	Simplify: $(6a^4b^5c)^2$	$36a^8b^{10}c^2$	8.EE.A.1
8	Evaluate $(-2)^4 \bullet 3^4$	1,296	8.EE.A.1
9	Simplify: $(3x^3y^5)^3(x^6y)$	$27x^{15}y^{16}$	8.EE.A.1
10	Evaluate $(-5)^2 \bullet (-5)^3$	-3125	8.EE.A.1
11	A farmer has a rectangular field with dimensions $3x^2$ meters by $4x$ meters. What is the total area of the field?	$3x^2 \bullet 4x = 12x^3$ square meters	8.EE.A.1
12	Simplify the expression: $(3ab)^2(5a^2)(2a^3b^4)^3$	$360a^{13}b^{14}$	8.EE.A.1
13	Write an expression representing the area of square that has side lengths, $10x^2y$	$Area = 10x^2y \bullet 10x^2y$ $Area = 100x^4y^2 \text{ units}^2$	8.EE.A.1

Distributing Exponents Worksheet | Grades 6 to 8 | Answers




Question number	Question	Answers	Standard
14	A garden has rows of plants, with each row containing $6a$ flowers. If there are $3a^2$ rows, write an expression that represents the total amount of flowers.	$6a \times 3a^2 = 18a^3$ flowers	8.EE.A.1
15	A manufacturer produces $4z$ units of a product each day. If the production continues for $5z^2$ days, write an expression representing the total amount of products.	$4z \bullet 5z^2 = 20z^3$ $20z^3$ products	8.EE.A.1

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