

Ch 7 Test Review**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

Evaluate the expression.

- _____ 1. $3^2 \cdot 3^{-2}$
- a. 3
b. 0
c. 1
d. $\frac{1}{81}$

Simplify. Write the expression using only positive exponents.

- _____ 2. $x^{-2} \cdot x^5$
- a. $\frac{1}{x^{10}}$
b. x^{10}
c. $\frac{1}{x^3}$
d. x^3

- _____ 3. $\frac{x^{-5}}{x^9}$
- a. $\frac{1}{x^{14}}$
b. x^4
c. $\frac{1}{x^4}$
d. x^{14}

Simplify the expression. Write your answer as a power.

- _____ 4. $3^7 \cdot 3^6$
- a. 3^{13}
b. 9^{42}
c. 3^{42}
d. 9^{13}

Simplify the expression.

- _____ 5. Which is the expression $\frac{-63c^{11}}{7c^3}$ in simplest form?
- a. $-9c^{11/3}$
b. $-9c^8$
c. $-70c^{11/3}$
d. $-70c^8$

Simplify the expression by using the power of a power property.

_____ 6. $(-3v^5w^6x^3)^2$

a. $9v^7w^8x^5$

b. $9v^{10}w^{12}x^6$

c. $-9v^{10}w^{12}x^6$

d. $-9v^7w^8x^5$

Simplify the expression.

_____ 7. $\frac{2^6p^{16}}{2^3p^{12}}$

a. 2^9p^{28}

b. $4p^4$

c. $4p^{1.5}$

d. $8p^4$

_____ 8. Which of the following relations is a function?

a.

Input x	Output y
-7	2
-6	2
-5	14

c.

Input x	Output y
-7	4
-6	2
-7	9

b.

Input x	Output y
-6	4
-6	2
-7	9

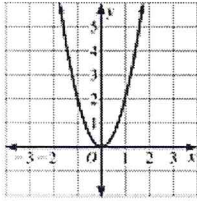
d.

Input x	Output y
-8	4
-7	2
-7	9

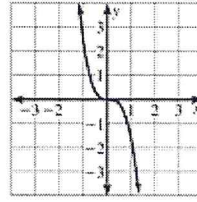
Identify the correct graph.

9. Which of the following shows the graph of the function $y = 2x^3$?

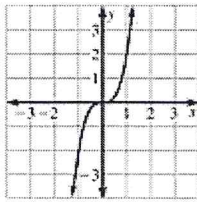
a.



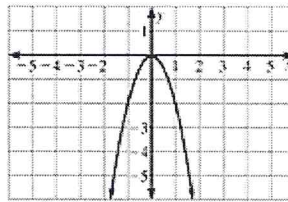
c.



b.

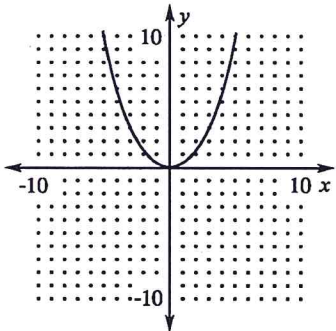


d.

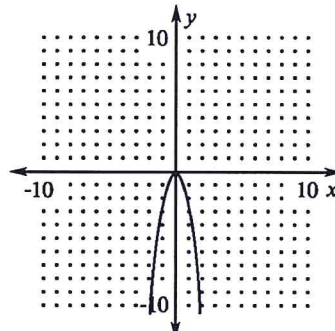


10. Graph $y = -\frac{1}{4}x^2$.

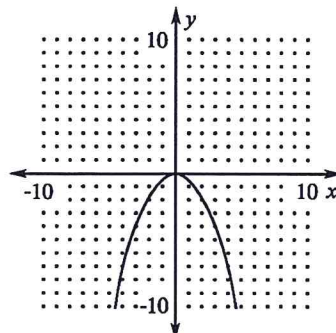
a.



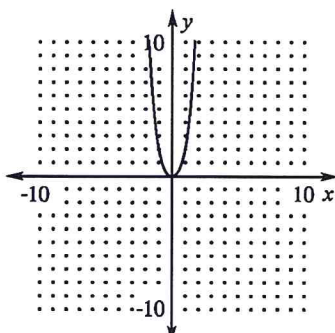
c.



b.

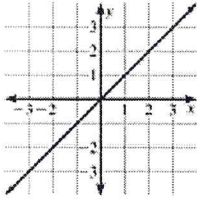


d.

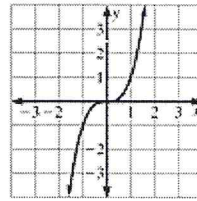


11. Which of the following does *not* represent a function?

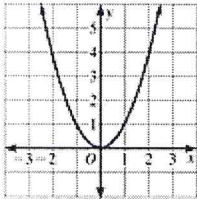
a.



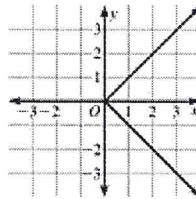
c.



b.



d.



Short Answer

Simplify the expression by using the power of a product property.

1. $(a^2)^6$

Identify the domain and range of the relation.

2. $(1, 3), (2, 6), (3, 9), (4, 12), (5, 15)$

Name: _____

ID: A

Use the information provided to answer the questions.

3. The table shows the relationship between x and y .

x	y
1	3
2	2
3	1
4	0

Write an equation that represents the relationship.

Write a function rule that relates x and y .

4.

Input x	1	2	3	4	5
Output y	11	17	23	29	35