

**Topic:** Negative exponents and power rule**Question:** Write the expression with no negative exponents.

$$\frac{1}{x^{-2}}$$

**Answer choices:**

A  $\frac{1}{-2x^2}$

B 0

C  $x^{\frac{2}{7}}$

D  $x^2$



**Solution: D**

In order to get rid of the negative exponent, we change the exponent in  $x^{-2}$  from  $-2$  to  $2$  and move the resulting expression from the denominator to the numerator.

$$\frac{1}{x^{-2}}$$

$$1 \cdot x^2$$

Since  $1 \cdot x^2 = x^2$ , this can be written as

$$x^2$$



**Topic:** Negative exponents and power rule**Question:** Simplify the expression.

$$\frac{x^2}{x^{-3}}$$

**Answer choices:**

A  $x^5$

B  $x^{-1}$

C  $x^{-5}$

D  $x^6$



**Solution: A**

In order to get rid of the negative exponent, we change the exponent in  $x^{-3}$  from  $-3$  to  $3$  and move the resulting expression from the denominator to the numerator.

$$\frac{x^2}{x^{-3}}$$

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

Now, since we have like bases, we add the exponents.

$$x^{2+3}$$

$$x^5$$



**Topic:** Negative exponents and power rule**Question:** Simplify the expression.

$$\frac{b^3c^{-2}}{a^{-2}}$$

**Answer choices:**

- A  $a^2b^3c^2$
- B  $a^{-2}b^3c^{-2}$
- C  $a^{-2}b^3c^2$
- D  $\frac{a^2b^3}{c^2}$



**Solution: D**

First, we'll deal with the negative exponents. Remember that

$$x^{-a} = \frac{1}{x^a}$$

and

$$x^a = \frac{1}{x^{-a}}$$

First we'll move the  $a$  term, which has a negative exponent.

$$\frac{b^3 c^{-2}}{a^{-2}}$$

$$\frac{a^2 b^3 c^{-2}}{1}$$

Then we'll move the  $c$  term, which also has a negative exponent.

$$\frac{a^2 b^3}{1 c^2}$$

$$\frac{a^2 b^3}{c^2}$$

