453#10-21

Dividing Exponents

Section 10.4 & 10.5

10.3

Exponents & Negative numbers

- When negative numbers are raised to an exponent, the following rules hold true:
  - If the exponent is odd- the answer is negative
  - If the exponent is even- the answer is positive
- Examples:

1. $(-2)^2 = 4$
2. $(-2)^3 = -8$
3. $(-2)^4 = 16$
4. $(-2)^5 = -32$

Division of Powers

$$\frac{a^m}{a^n} = a^{m-n}, a \neq 0$$

$\frac{a \cdot a \cdot a}{a}$

Examples

1. $\frac{a^3}{a} = a^2$

$a^{3-1} = a^2$

2. $\frac{a^{15}}{a^7} = a^8$

3. $\frac{a^5 b^4}{a^2 b} = a^3 \cdot b^3$

4. $\frac{a^6 b^3 c}{a^2 b} = a^4 b^2 c$

$\frac{10}{5} = 2$

Examples

5. $\frac{6a^2b^4}{2a^2b^7} = \frac{3}{b^3}$

6. $\frac{-15a^5b^4}{5a^4b^2} = -3ab^2$

7. $\frac{a^5b^4c^8}{a^5b^3c^4} = b^1c^4$

8. $\frac{-12a^6b^2}{-4a^2b} = 3a^4b^1$

CLASSWORK

- Blue book
- Pg 247 # 1-18
- Pg 249 # 1-12

- Wkst 8.3 A # 1-8
- Wkst 8.3 B # 1-7

① $b^4 \div b^3 = \frac{b^4}{b^3} = b$

HOMEWORK

- Pg 466 # 3-9