Section 1.1 &1.2

- Variables in algebra
- Exponents and powers

DEFINITIONS

VARIABLE: a letter used to represent an unknown number

EXPONENT: a shorter/easier way to write multiplication

- Squared- x^2 "area of"
- Cubed- x^3 "volume of"

EXAMPLES

- SIMPLIFY:
- 1.) $x \cdot x \cdot x \cdot x = x^4$
- 2.) $7 \cdot 7 \cdot 7 \cdot p \cdot p \cdot p \cdot p = 7^3 p^4$
- 3.) $5 \cdot 5 \cdot y \cdot y \cdot y = 5^2 y^3$
- 4.) $2z \cdot 2z \cdot 2z = (2z)^3$

Examples

- Simplify:
- 5.) $4^2, 8^2, 4^3, 2^5$

16, 64, 64, 32

7.) $x^2 - y$ *when* $x = 6$ *and* $y = 10$

$6^2 - 10$

$36 - 10$

26

- 6.) x^3 *when* $x = 4$

$4^3 = 64$

Examples

- Simplify
- 8.) $(x-1)^3$ *when* $x = 4$

$(4-1)^3$

$3^3 = 27$

9.) $x^3 - 1$ *when* $x = 4$

$4^3 - 1$

$64 - 1$

63

- 10.) $(a+b)^2$ *when* $a = 3$ *and* $b = 1$

$(3+1)^2 = (4)^2 = 16$

Classwork

- Pg 6 # 5-18
- Pg 12 # 4-16

Homework

- Pg 6 # 19-32
- Pg 12 # 17-45 odd