

M9 - 3.3 - Multiplication-Exponential Form (+/-) HW

Write the following in exponential form, then evaluate if possible.

$$2 \times 2 \times 2 \times 2 \times 2 = 2^5 = 32$$

$$-2 \times -2 \times -2 = (-2)^3 = -8$$

$$4 \times 4 \times 4 =$$

$$-3 \times -3 \times -3 =$$

$$5 \times 5 =$$

$$-5 \times -5 =$$

$$3 \times 3 \times 3 \times 3 =$$

$$-6 \times -6 =$$

$$1 \times 1 \times 1 \times 1 =$$

$$-5 \times -5 \times -5 \times -5 =$$

$$9 \times 9 =$$

$$-6 \times -6 \times -6 \times -6 =$$

$$6 \times 6 \times 6 =$$

$$(-2) \times (-2) \times (-2) = (-2)^3 = -8$$

$$x \times x =$$

$$(-2) \times (-2) \times (-2) \times (-2) =$$

$$a \times a \times a =$$

$$(-m) \times (-m) \times (-m) =$$

$$5 = 5^1 = 5$$

$$(-a)(-a) =$$

$$6 =$$

$$-4 \times 4 \times 4 = -4^3 = -64$$

$$(3)(3)(3) = (3)^3 = 27$$

$$-5 \times 5 =$$

$$(5)(5)(5) =$$

$$-9 \times 9 \times 9 \times 9 =$$

$$(x)(x) =$$

$$-(-2) \times (-2) \times (-2) = -(-2)^3 = 8$$

$$-(-2) \times (-2) \times (-2) \times (-2) =$$

$$-(-3)(-3) =$$

M9 - 3.3 - Exponential-Multiplication Form (+/-) HW

Write as a repeated multiplication, then evaluate.

$$4^2 = (4 \times 4) = 16$$

$$-3^4 = (-3 \times 3 \times 3 \times 3) = -81$$

$$2^3 =$$

$$-5^2 =$$

$$3^2 =$$

$$(-2)^4 = (-2)(-2)(-2)(-2) = 16$$

$$2^5 =$$

$$(-2)^2 =$$

$$3^3 =$$

$$(-1)^4 =$$

$$2^4 =$$

$$(-5)^3 =$$

$$2^2 =$$

$$(-2)^3 =$$

$$5^4 =$$

$$-(3)^4 = -(3)(3)(3)(3) = -81$$

$$4^4 =$$

$$-(1)^3 =$$

$$3^4 =$$

$$-(2)^2 =$$

State whether Positive or Negative

$$-4^{\text{even}} = +$$

$$-(2)^3 =$$

$$-3^{\text{odd}} =$$

$$(-2^3) = (-2 \times 2 \times 2) = -8$$

$$(-3)^{\text{odd}} =$$

$$(-2^4) =$$

$$(-6)^{\text{even}} =$$

$$-(-1)^4 = -(-1)(-1)(-1)(-1) = -1$$

$$-(-2)^{\text{odd}} =$$

$$-(-2)^3 =$$

$$-(-5)^{\text{even}} =$$

$$-(-3)^3 =$$

$$-(-5)^4 =$$

M9 - 3.3 - Perfect Change of Base HW

Write in squared exponential form.

$4 = 2^2$

$49 =$

$169 =$

$36 =$

$9 =$

$144 =$

$100 =$

$121 =$

$196 =$

$25 =$

$225 =$

$400 =$

Write in cubed exponential form.

$27 = 3^3$

$64 =$

$512 =$

$8 =$

$343 =$

$1 =$

$125 =$

$216 =$

$729 =$

$1000 =$

Write to 4th power in exponential form.

$1 = 1^4$

$81 =$

$1296 =$

$256 =$

$2401 =$

$625 =$

$16 =$

$6561 =$

$10000 =$

Write with different bases in exponential form.

$16 = 2^4$

$64 =$

$81 =$

$256 =$

$4096 =$

$16 = 4^2$

$64 =$

$81 =$

$256 =$

$4096 =$

$256 =$

$4096 =$

$4096 =$

M9 - 3.3 - Imperfect Change of Base HW

Change to Exponential Form with Lowest Bases

$12 = 3 \times 2^2$

$72 =$

$18 =$

$75 =$

$20 =$

$76 =$

$24 =$

$76 =$

$28 =$

$80 =$

$32 =$

$84 =$

$40 =$

$88 =$

$44 =$

$90 =$

$45 =$

$96 =$

$48 =$

$98 =$

$50 =$

$108 =$

$52 =$

$128 =$

$54 =$

$135 =$

$56 =$

$162 =$

$60 =$

$189 =$

$63 =$

$192 =$

$68 =$

M9 - 3.3 - Lowest Base Change of Base HW

Change to Exponential Form with Lowest Bases

$$\begin{aligned} 16^4 &= \\ (16)^4 & \\ (2^4)^4 & \\ \mathbf{2^{16}} & \end{aligned}$$

$25^2 =$

$169^3 =$

$125^4 =$

$64^2 =$

$16^4 =$

$625^2 =$

$1024^2 =$

$81^3 =$

$27^3 =$

$49^5 =$

$243^2 =$

$$\begin{aligned} 18^2 & \\ (3^2 \times 2^1)^2 & \\ \mathbf{3^4 \times 2^2} & \end{aligned}$$

$12^3 =$

$100^3 =$

$72^2 =$

$60^3 =$

$36^5 =$

$108^3 =$

$76^2 =$

$128^4 =$