

Example 2**Self Tutor**Write in exponent form: $2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 3$

$$2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 3 = 2^4 \times 3^3 \quad \{4 \text{ factors of } 2, \text{ and } 3 \text{ factors of } 3\}$$

Example 3**Self Tutor**Write as a natural number: $2^3 \times 3^2 \times 5$

$$\begin{aligned} & 2^3 \times 3^2 \times 5 \\ &= 2 \times 2 \times 2 \times 3 \times 3 \times 5 \\ &= 8 \times 9 \times 5 \\ &= 40 \times 9 \\ &= 360 \end{aligned}$$

Example 4**Self Tutor**

Evaluate:

a $(-5)^2$

b -5^2

c $(-5)^3$

d $-(-5)^3$

a $(-5)^2$
 $= 25$

b -5^2
 $= -1 \times 5^2$
 $= -25$

c $(-5)^3$
 $= -125$

d $-(-5)^3$
 $= -1 \times (-5)^3$
 $= -1 \times -125$
 $= 125$

Notice the effect of the brackets.

**Example 5****Self Tutor**Find, using your calculator: **a** $(-5)^4$ **b** -7^4

a $(-5)^4 = 625$

b $-7^4 = -2401$

TI-84 Plus

$(-5)^4$	625
-7^4	-2401