Section 1.6   Focus Exercises

1.   Evaluate each expression.

   a) $(-9)^2 =$ _____

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

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

   d) $(5)^3 =$ _____

   e) $(10)^1 =$ _____

   f) $(-10)^5 =$ _____

   g) $(-3)^4 =$ _____

   h) $(-6)^1 =$ _____

   i) $(-1)^7 =$ _____

   j) $-5^2 =$ _____

   k) $-8^1 =$ _____

   l) $-4^3 =$ _____

2.   Evaluate each radical expression, if possible. If the radical is undefined, say so.

   a) $\sqrt{-25} =$ _____

   b) $-\sqrt{49} =$ _____

   c) $\sqrt{100} =$ _____

   d) $-\sqrt{16} =$ _____

   e) $\sqrt{-4} =$ _____

   f) $-\sqrt{-9} =$ _____

3.   Evaluate each expression.

   a) $(2-7)^2$

   b) $2^2 - 7^2$

   c) $2 - 7^2$

   d) -7^2

4.   Evaluate each expression according to the *Order of Operations*.

   a) $30 \div 5 \cdot 2$

   b) $-4 \cdot \sqrt{9}$

   c) $15 - 6 \cdot 3$

   d) $30 \div 10 - 4$

   e) $(6-4)^2$

   f) $36 \div 3 + 6 \div 2$

5. Evaluate each expression according to the *Order of Operations*.

a) $(6 \cdot 5) \div (5 - 2)$

b) $\dfrac{48 - 2 \cdot 12}{2}$

c) $\dfrac{\dfrac{29 - 25}{8}}{\sqrt{4}}$

d) $9 - \dfrac{2 \cdot 6}{\sqrt{16}}$

e) $\sqrt{6^2 + 8^2}$

f) $\left| 2 - 8 \right| - \left| -9 \right|$

5. Identify the *main operation* in each expression and state whether it is a *sum*, *difference*, *product*, *quotient* or *power*. DO NOT EVALUATE THE EXPRESSIONS.

	Expression	Main Operation	the expression is a:
a)	$30 \div 5 \cdot 2$	_____	_____
b)	$15 - 6 \cdot 3$	_____	_____
c)	$(6 - 4)^2$	_____	_____
d)	$36 \div 3 + 6 \div 2$	_____	_____
e)	$-4 \cdot \sqrt{9}$	_____	_____