1.1 Evaluating Expressions and Order of Operations

Variable:

Algebraic Expression(__________):

Evaluate:

Evaluate each expression when n = 3

Power:

\[ 5^3 = 5(5)(5) = 125 \]

Write the power in words and as a product:

ORDER of OPERATIONS:

G-  
E-  
M-  D-  
A-  S-
Simplify each expression:

Evaluate each expression:

You try!

SUMMARY:

Now, summarize your notes here!
1.1 Evaluating Expressions and Order of Operations

Evaluate the expression:

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1) (.4r) when (r=6)</td>
<td>2) (.8 + h) when (h = 3.7)</td>
<td>3) (\frac{1}{2}k) when (k = \frac{2}{3})</td>
</tr>
</tbody>
</table>

Write the power in words and as a product.

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>4) (12^5)</td>
<td>5) (\left(\frac{1}{2}\right)^8)</td>
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</table>

Describe AND correct the error in evaluating the power.

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<tbody>
<tr>
<td>6) ((0.4)^2 = 2(0.4) = 0.8)</td>
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</tbody>
</table>

Evaluate the power.

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<tbody>
<tr>
<td>7) (1^5)</td>
<td>8) (2^6)</td>
<td>9) (\left(\frac{1}{6}\right)^3)</td>
</tr>
</tbody>
</table>

Evaluate the expression.

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<tbody>
<tr>
<td>10) (x + y) when (x = 11) and (y = 6.4)</td>
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Evaluate the expression:

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<tbody>
<tr>
<td>11) (13 - 8 + 3)</td>
<td>12) (5 \cdot 2^3 + 7)</td>
<td>13) (2^4 \cdot 4 - 2/8)</td>
</tr>
</tbody>
</table>
14) \(24 + 4(3 + 1)\)

15) \(\frac{1}{2}(21 + 2^2)\)

16) \(8[20 - (9 - 5)^2]\)

---

Describe and correct the error in evaluating the expression.

\[
20 - \frac{1}{2} \cdot 6^2 = 20 - 3^2
\]

17) \(= 20 - 9\)

\(= 11\)

---

Evaluate the expression:

18) \(6t^2 - 13\) when \(t = 2\)

19) \(3(m^2 - 2)\) when \(m = 1.5\)

20) \(\frac{b^3 - 21}{5b + 9}\) when \(b = 3\)

---

Skillz Review

<table>
<thead>
<tr>
<th>Plot the points:</th>
<th>Simplify:</th>
<th>Simplify:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) ((4, -2))</td>
<td>2) ((0, 3))</td>
<td>3) (\frac{5 - (-3)}{10 - 6})</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4) (-2(-1)^2 + 4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5) (\frac{10 - 16}{3 - (-3)})</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6) (-4 - \left(\frac{6}{2}\right) + 5(-1))</td>
</tr>
</tbody>
</table>
1.1 Evaluating Expressions and Order of Operations

Directions: EVALUATE:

1) \( n^3 \) when \( n = \frac{2}{3} \)

2) \( \frac{h^2 - 1}{h + 3} \) when \( h = 5 \)

3) For your birthday you get an i-Tunes gift card. The total cost for you to buy 3 albums at $9.99 each and then 5 individual songs each worth $1.29 is given by the expression \( 3(9.99) + 5(1.29) \).

   a) Find the total cost of your i-Tunes purchases.

   b) Suppose your gift card is worth $50. How much money (if any) do you have left?

DIRECTIONS: Evaluate the given formula for each geometric shape.

\[
\text{Perimeter} = 2(l + w)
\]

4) \( L = 15, w = 7 \)

5) \( L = 8.25, w = 4.5 \)

\[
\text{Area of Trapezoid} = \frac{(b_1 + b_2)h}{2}
\]

6) \( b_1 = 2, b_2 = 4, h = 4 \)

7) \( b_1 = 20, b_2 = 24, h = 14 \)