Bonus Algebra Activities

reprinted from the Quebec Association of Mathematics Teachers journal.

How would you use parentheses to make these equations true?

$$72 \div 2 \times 4 \div 4 + 5 = 1$$

 $72 \div 2 \times 4 \div 4 + 5 = 16$
 $72 \div 2 \times 4 \div 4 + 5 = 41$
 $72 \div 2 \times 4 \div 4 + 5 = 10 - 3$
 $72 \div 2 \times 4 \div 4 + 5 = 6$

2. What value does the following expression approach as ₹⁻∞+

$$\log_3 (61-5) - \log_3 (21+1)$$

3. If
$$f(X) = \underbrace{X+1}_{X-1}$$
, evaluate $\underbrace{f(f(X))+1}_{f(f(X))-1}$

4. Consider the following method for evaluating

then
$$I = \sqrt{20 + I}$$

$$\mathfrak{I}^2 = 20 + \mathfrak{I}$$

$$\mathfrak{I}^2 - \mathfrak{I} - 20 = 0$$

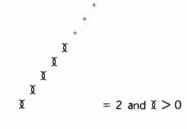
$$(\mathfrak{I} - 5) (\mathfrak{I} + 4) = 0$$

$$\mathfrak{I} = 5 \text{ or } -4, \text{ but } \mathfrak{I} \neq -4 \therefore \mathfrak{I} = 5.$$

Now you try a similar method for

a)
$$1 + \frac{2}{1 + 2}$$
 $1 + \frac{2}{1 + 2}$

b) and to evaluate I given:



ANSWERS: 2.) Expression $\log_3 3 = 1$

3.) X

4.) a) 2 b) $\chi = \sqrt{2}$

Reprinted from Vector, Newsletter/Journal of the British Columbia Association of Mathematics Teachers.