

Utttrykk och emvartioner med parenteser

Regler Parenteser

$$a(b+c) = ab+ac$$

$$(a+b)(c+d) = ac+ad+bc+bd$$

$$-a(b+c) = -ab-ac$$

$$-(a+b) = -a-b$$

Ex, 1. Förenkla uttrycken

$$a) (2+x) + (4+x) =$$

$$= 2+x+4+x = 6+2x$$

$$b) 2(1+3x) - (4+3x)$$

$$= 2+6x-4-3x =$$

$$= -2+3x$$

$$c) -7(-3x-5) - (5-x)$$

$$= 21x+35-5+x = 22x+30$$

2. Lös emvartionerna

$$a) 2(x+2) - 3(x+5) = 3$$

$$2x+4-3x-15 = 3$$

$$-x-11 = 3$$

$$-x = 14$$

$$x = -14$$

$$b) \frac{1}{2} \left(\frac{y}{4} + \frac{1}{3} \right) = \frac{5}{4}$$

$$\frac{1}{2} \cdot \frac{y}{4} + \frac{1}{2} \cdot \frac{1}{3} = \frac{5}{4}$$

$$\frac{y}{8} + \frac{1}{6} = \frac{5}{4}$$

$$\frac{y}{8} = \frac{5}{4} - \frac{1}{6} = \frac{15}{12} - \frac{2}{6} = \frac{13}{12}$$

$$\frac{y}{8} = \frac{13}{12}$$

$$y = \frac{13}{12} \cdot 8 = \frac{104}{12} = \frac{62}{6} = \frac{31}{3}$$