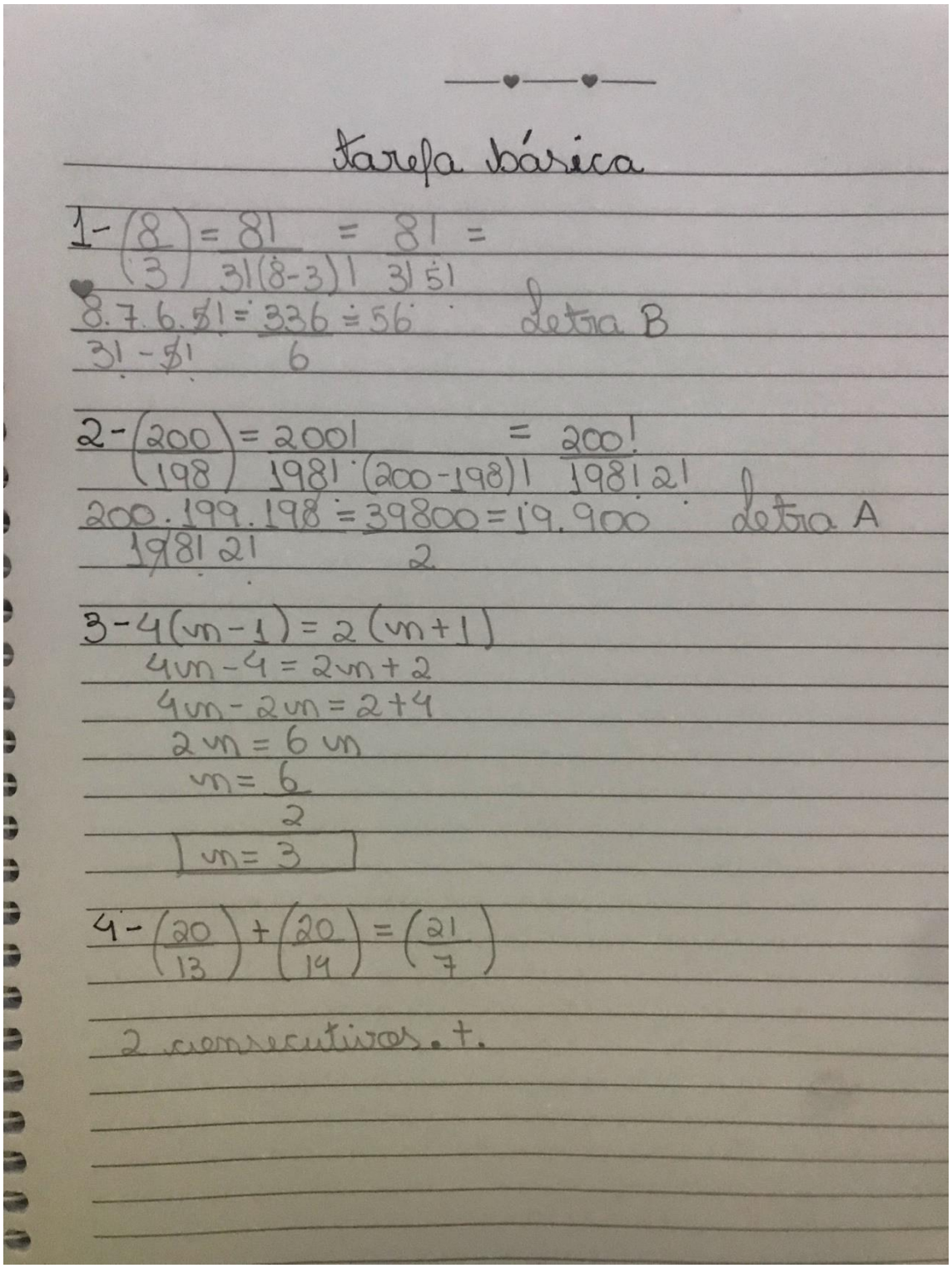
Nome: Beatriz Adolfo da Silva – CTII317



Tarefa básica

1- $\binom{8}{3} = \frac{8!}{3!(8-3)!} = \frac{8!}{3!5!} =$

$\frac{8.7.6.5!}{3!.5!} = \frac{336}{6} = 56$ Letra B

2- $\binom{200}{198} = \frac{200!}{198!.(200-198)!} = \frac{200!}{198!2!}$

$\frac{200.199.198}{198!2!} = \frac{39800}{2} = 19.900$ Letra A

3- $4(n-1) = 2(n+1)$

$4n - 4 = 2n + 2$

$4n - 2n = 2 + 4$

$2n = 6n$

$n = \frac{6}{2}$

$n = 3$

4- $\binom{20}{13} + \binom{20}{14} = \binom{21}{7}$

2 consecutivos. t.

6- A) 10 $\binom{10}{p} = \binom{10}{0} + \binom{10}{1} \cdots \binom{10}{10}$ ↳ linha 10

↳ $2^{10} = 1024$

p=0

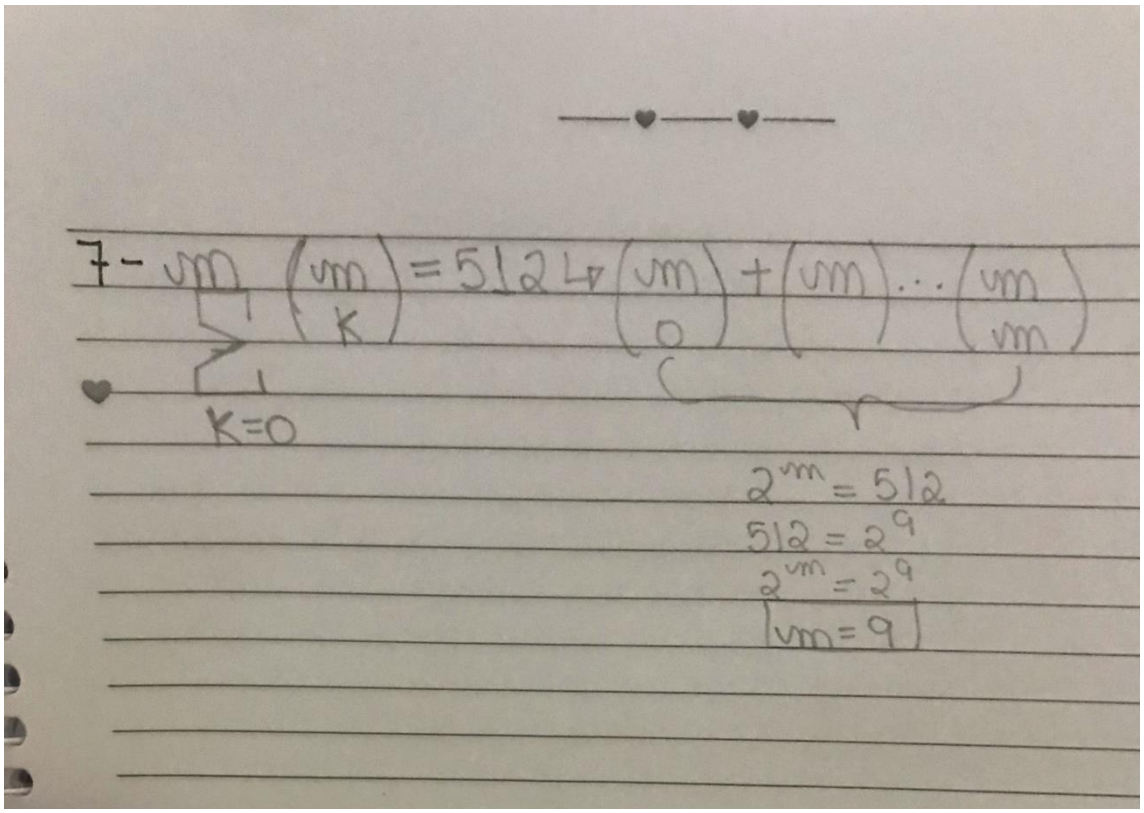
B- 9 $\binom{10}{p} = \binom{10}{0} + \binom{10}{1} \cdots \binom{10}{9}$ ↳ linha 10

p=0 linha 10 $- \binom{10}{10} = 2^{10} - 1 = 1024 - 1 = 1024$

C) 9 $\binom{9}{p} = \binom{9}{2} + \binom{9}{3} \cdots \binom{9}{3}$ ↳ linha 9

p=2 linha 9 $- \binom{9}{0} - \binom{9}{1} = 2^9 - 1 - 9$

$512 - 10 = 502$


7- $\sum_{k=0}^{m} \binom{m}{k} = 512 \rightarrow \binom{m}{0} + \binom{m}{} \cdots \binom{m}{m}$
k=0
$2^m = 512$
$512 = 2^9$
$2^m = 2^9$
$m = 9$