

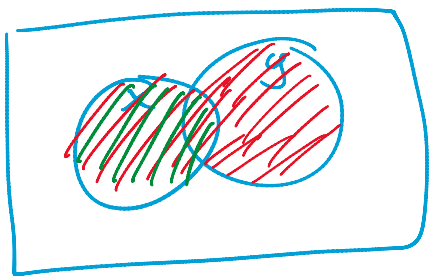
In-Class Activity 3

Monday, October 10, 2022 10:40 PM

Ex 4 Q 3b
Ex 5 Q 9, 12, 13, 15
Ex 6 Q 1, 6, 8, 10

Ex 4

3b) $x * (x + y) = x$



$x + y$ ///
 x ///

$$\begin{array}{c|c|c|c|} x & y & x+y & x*(x+y) \\ \hline 0 & 0 & 0 & 0 \\ 0 & 1 & 1 & 0 \\ 1 & 0 & 1 & 1 \\ 1 & 1 & 1 & 1 \end{array} = \begin{array}{c|c} x & \\ \hline 0 & \\ 0 & \\ 1 & \\ 1 & \end{array}$$

Ex 5

9) $[x(y' + 2)]'$

$x' + (y' + 2)'$ T15a

$x' + (y'' + 2')$ T15b

$= x' + y'' + 2'$ T13

11) $[f(x) \dots g(x)]'$

$$12) [(x' + y)(xy + z)]'$$

$$(x' + y)' + (xy + z)' \quad T15a$$

$$x'' \cdot y' + (xy)' \cdot z' \quad T15b$$

$$x'' \cdot y' + (x' + y') \cdot z' \quad T15a$$

$$xy' + (x' + xy') z' \quad T14d$$

$$xy' + x'z' + xy'z' \quad L8a$$

$$xy' + xy'z' + x'z'$$

$$xy'(\cancel{1 + z'})' + x'z' \quad L8a$$

$$xy' + x'z'$$

$$13) x(yz' + y'z) + xy'z'$$

$$xyz' + xy'z + xy'z'$$

$$xyz' + xy'z' + xy'z$$

$$xz'(y + y')' + xy'z$$

$$xz' + xy'z$$

$$x(z' + y'z)$$

$$x(z' + y') \quad T14d$$

Ex 6
1)

| x | y | z | F |
|-----|-----|-----|-----|
| 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 1 |
| 0 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 |
| 1 | 0 | 0 | 1 |
| 1 | 0 | 1 | 0 |
| 1 | 1 | 0 | 0 |
| 1 | 1 | 1 | 0 |

| $x \backslash y$ | 00 | 01 | 11 | 10 |
|------------------|----|----|----|----|
| 0 | 0 | 1 | 0 | 1 |
| 1 | 1 | 0 | 0 | 0 |

$x =$
 $y =$
 $z =$

$x = 1$
 $y =$
 $z =$