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PHILOS 12A / DIS 102

GSI: Mathias Boehm

Practice Set #1

Exercise 1.7

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Original | Rotated 90° | Rotated 180° | Rotated 270° |
| 1. | *False* | False | False | False |
| 2. | *False* | False | False | False |
| 3. | *True* | False | False | True |
| 4. | *False* | False | True | True |
| 5. | *True* | False | False | False |
| 6. | *False* | False | True | False |

Exercise 1.12

1. Claire’s father is taller than Max’s father.
2. Max’s father is John.
3. Claire is taller than her maternal grandmother.
4. Max’s maternal grandmother is taller than Max’s paternal grandmother.
5. Melanie’s mother is Claire’s mother.

Exercise 1.13

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Leibniz’s | Bolzano’s | Boole’s | Wittgenstein’s |
| 1. | *True* | True | False | False |
| 2. | True | True | True | True |
| 3. | True | False | False | True |
| 4. | True | True | False | True |
| 5. | *False* | False | False | False |
| 6. | True | *True* | True | True |
| 7. | True | True | True | True |
| 8. | True | False | *False* | True |
| 9. | True | True | True | False |
| 10. | True | True | False | True |

Exercise 1.20

(I know that I wasn’t that specific in regard to mentioning Clause 1 for every case in Clause 2, but it would’ve been very repetitive)

1. (0 + 0) is a term. As stated by Clause 1, 0 is a term. The expression (0 + 0) is also a term because of Clause 2. It specifically applies to the addition expression. The term being referred to is 0 because 0 + 0 = 0.
2. (0 + (1 \* 0)) is a term. 1 and 0 are terms as stated by Clause 1. The problem (1 \* 0) is a term because of Clause 2, specifically the one about multiplication. After finding the product of that, it goes to (0 + 0), which itself is a term by Clause 2 as well, dealing one with addition. After everything, the term being referred to is 0 as 1 \* 0 = 0 and 0 + 0 = 0.
3. ((1 + 1) + ((1 + 1) \* (1 + 1))) is a term. At first sight, the only number present is 1, which makes it a term via Clause 1. The three (1 + 1) expressions in their respective cases are all terms as stated by Clause 2. The sum expression is being applied in this case. Embedded in the problem is ((1 + 1) \* (1 + 1)), which is also a term by Clause 2. After summing and finding the product, the number being referred to is 6 because it will be 2 + (2 \* 2) = 2 + 4 = 6.
4. (((1 \* 1) \* 1) \* 1) is a term. The numbers contained in this expression all involve 1, which satisfies that this is a term by Clause 1. There are numerous causes of (t1 \* t2) expressions throughout this problem. In all cases, it will be (1 \* 1), which is a term as explained by Clause 2. The number being referred to is 1 because the expression is just three 1s being multiplied ((1 \* 1) \* 1) = (1 \* 1) = 1.