

Classification theory

Exercise 2

(In exercises 1 and 2, we let $x = v_1$ and $y = v_{27}$.)

1. Let $\Delta = \{x = y, E_n(x, y)\}$, $\Delta' = \{x = y\}$, $p = \{x = x\}$ and $q = \{E_n(x, a)\}$. Calculate $R_\Delta(r, \xi)$ and $R_{\Delta'}(r, \xi)$ for $r \in \{p, q\}$ and $\xi \in \{2, \omega\}$ in the cases when the theory is

- (i) T_2 ,
- (ii) T_ω .

2. Let the theory be that of Exercise 6.7 from the notes of model theory, $\Delta = \{7x = y\}$, $p = \{x = x\}$ and $q = \{2x = a \vee 5x = a\}$, where a is a non-zero vector. Calculate $R_\Delta(r, \xi)$ for $r \in \{p, q\}$ and $\xi \in \{2, \omega\}$.

3. Exercise 1.13

4. Exercise 1.16.

5. Exercise 2.3.