This study investigated predictors of the quality of middle school students' relationships with their math teachers. The participants were fifth- and sixth-grade middle school students and their math teachers in a Midwestern, rural school district. This study expands previous research, which has measured the quality of relationships using only teacher or only student perspectives. Middle school students and their math teachers participated in a cross-sectional survey in order to understand their perceptions of their relationships with each other. This design allowed prediction of students’ perceptions of the quality of their relationships with their teachers. Analyses revealed that students’ math interest, math self-efficacy, and perceptions of their teachers’ prosocial behaviors positively predicted students’ perceptions of positive teacher relationships. The teachers’ relationship perceptions also predicted students’ positive teacher relationship perceptions. Unexpectedly, teachers’ socio-emotional support perceptions were not significantly associated with students’ positive teacher relationship perceptions. Furthermore, these data show that students’ own reports of math interest and math self-efficacy predicted their perceptions of positive teacher relationships. Moreover, students’ perceptions of their teachers’ prosocial classroom behaviors strongly predicted students’ views of positive relationships with their teachers. Teachers’ prosocial classroom behaviors are malleable, and study findings suggest further research on how teachers’ prosocial behaviors shape students’ positive teacher relationships.