

ZMATH 2016f.01048

Kontorovich, Igor'; Zazkis, Rina

Turn vs. shape: teachers cope with incompatible perspectives on angle.

Educ. Stud. Math. 93, No. 2, 223-243 (2016).

Summary: This study is concerned with tensions between the two different perspectives on the concept of angle: angle as a static shape and angle as a dynamic turn. The goal of the study is to explore how teachers cope with these tensions. We analyze scripts of 16 in-service secondary mathematics teachers, which feature a dialogue between a teacher and students around the following statement: "The sum of the exterior angles of a polygon is 360° ." The findings show that while addressing a variety of intellectual needs of their student characters, in many cases, the teachers compromise the mathematical rigour of the concept of angle.

Classification: G49 C39

Keywords: angles; polygons; scriptwriting; intellectual needs; teacher knowledge; intuitive rules

doi:10.1007/s10649-016-9699-2