Practice worksheet | Proof and circle geometry

Intersecting-chord/secant/tangent length relationships

Name: _____ Date: _____

6 questions | 16 marks

1. Chords meet at E with segment lengths 2 and 15 on one chord, and 5 and x on the other. Find x. [2 marks]

2. A tangent has length 10. A secant from the same point has outside length 4. Find its whole length. [2 marks]

3. A secant has outside length 2 and whole length 18. Another has outside length 3. Find the second secant's inside length. [3 marks]

4. A tangent is 12 cm long. The external point is 13 cm from the centre. Find the circle radius. [2 marks]

5. A student uses $PT^2 = 3 \times 8$ when a secant has outside part 3 and inside part 8. Correct the calculation. [3 marks]

6. Intersecting chords have parts x and $x + 3$ on one chord, and 2 and 14 on the other. Find x. [4 marks]