TRAPEZOID definitions

NAME_____

DATE _____ Per._____

1. a) Match each diagram with its best definition.

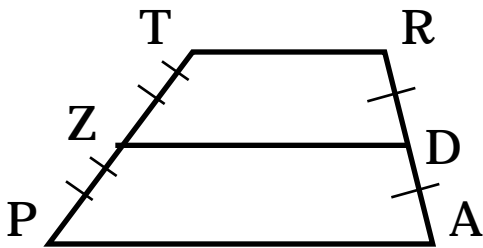| DEFINITION1:	DEFINITION2 :
A **trapezoid** is a quadrilateral with at least one pair of parallel sides.	A **trapezoid** is a quadrilateral with exactly two parallel sides.
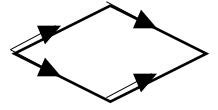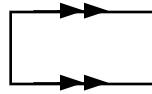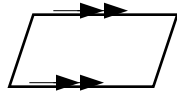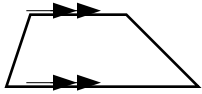
b) Which definition includes other quadrilaterals as trapezoids?

c) What shapes are included by this *inclusive* or *hierarchical* definition?

d) Parallelograms, rhombi, rectangles, and squares are not trapezoids by which *restrictive* definition?

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2. *ZD* is a **median** of this trapezoid. Use the diagrams markings to define trapezoid median.

TRAPEZOID MEDIAN Definition.:
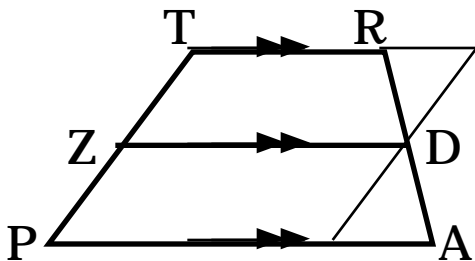
TRAPEZOID MEDIAN THM.: The median of a trapezoid is the average of the two parallel bases and parallel to each base.

$$/ / \overline{ZD} / /$$

$$= \frac{TR + AP}{2}$$

Complete the Trapezoid Median Theorem and proof.

STATEMENTS	JUSTIFICATIONS
1) _____ $/ / \overline{PA}$ _____	_____
2) $\overline{OI} / /\overline{TP}$ through D	_____
3) _____ $\cong \angle DAI$ _____	_____
4) _____	MIDPOINT & MEDIAN
5) $\angle RDO \cong \angle ADI$	_____
6) _____	ANGLE-SIDE-ANGLE
7) $\overline{ID} \cong \overline{DO}$ & $\overline{RO} \cong \overline{AI}$	_____
8) _____ is a parallelogram.	_____
9) _____ $\cong \overline{OI}$ & $\overline{IP} \cong$ _____	Opposite Equal Sides
10) _____ $=$ _____ $= TP \div 2$	_____ THM.
11) $ID = DO = $ _____ $\div 2$	MIDPOINT _____
12) _____ $= ZT$	_____
13) $TODZ$ is a _____	$/ /$ & $\cong$ *sides*
14) _____ $/ / \overline{TO} \left(/ /\overline{TR}\right)$	of parallelogram
15) $\overline{TR} / /\overline{AP} \Rightarrow \overline{ZD} / /$ _____	Parallel Transitivity Thm.
16) $DZ = $ _____ $(= IP)$	_____
17) $TR + RO = $ _____	_____
18) _____ $-AI = IP$	Segment Subtraction
19) $2ZD = ($ _____ $+$ _____ $)+($ _____ $-$ _____ $)$	Substitution & Addition
20) _____	Substitution & Division