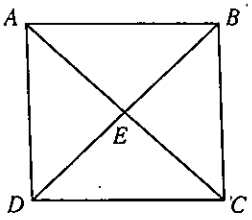
NAME _____ DATE _____ SCORE _____

Quadrilaterals

For use after Chapter 5

In Exercises 1–6 *ABCD* is a parallelogram. Complete.

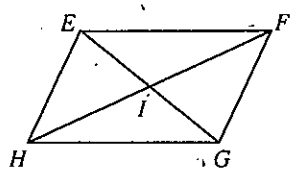
1. If $m\angle ADC = 92$, then $m\angle ABC =$ 92 and $m\angle DAB =$ 88.
2. If $BD = 20$, then $BE =$ 10.
3. If $AB = 9x - 2$ and $DC = 6x + 4$, then $x =$ 2.
4. If $AE = 9$ and $AC = 5x + 3$, then $x =$ 3.
5. If *ABCD* is a rectangle and $DE = 13.4$, then $AE =$ 13.4.
6. If *ABCD* is a rhombus, then $m\angle AED =$ 90.



Exs. 1–6

In Exercises 7–10 information is given about quadrilateral *EFGH*. What additional information is needed to prove *EFGH* is a parallelogram?

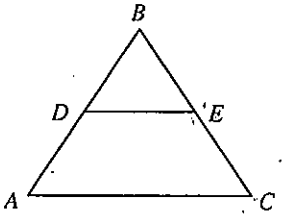
7. $\angle EHG \cong \angle EFG$ $\angle FEH \cong \angle FGH$
8. $\overline{EH} \parallel \overline{FG}$ $\overline{EH} \cong \overline{FG}$ OR $\overline{EF} \parallel \overline{HG}$
9. $\overline{EF} \cong \overline{HG}$ $\overline{EF} \parallel \overline{HG}$ or $\overline{EH} \cong \overline{FG}$
10. *I* is the midpoint of $\overline{EG}$. I is mdpt. of HF



Exs. 7–10

In Exercises 11–13, *D* is the midpoint of $\overline{AB}$. Complete.

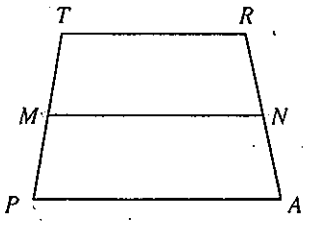
11. If *E* is the midpoint of $\overline{BC}$ and $AC = 26$, then $\angle BDE \cong \angle$ A and $DE =$ 13.
12. If $\overline{DE} \parallel \overline{AC}$ and $BE = 12$, then $BC =$ 24.
13. If $\overline{BE} \cong \overline{EC}$, then *ADEC* is a(n) trapezoid.



Exs. 11–13

In Exercises 14–17, *M* and *N* are the midpoints of $\overline{TP}$ and $\overline{RA}$, respectively, and *TRAP* is a trapezoid. Complete.

14. $\overline{MN}$ is the median of *TRAP*.
15. If $\overline{TP} \cong \overline{RA}$, then *TRAP* is a(n) isosc. trap.
16. If $MN = 16$ and $TR = 14$, then $PA =$ 18.
17. If $\overline{TP} \cong \overline{RA}$ and $m\angle P = 80$, then $m\angle A =$ 80 and $m\angle TMN =$ 80.



Exs. 14–17

Give the most descriptive name for quadrilateral *QUAD*.

18. $\overline{QU} \parallel \overline{DA}$; $\overline{QD} \parallel \overline{UA}$; $\overline{QD} \perp \overline{DA}$ Rectangle
19. $\overline{QU} \parallel \overline{DA}$; $\overline{QU} \cong \overline{UA} \cong \overline{DA}$ Rhombus
20. $\overline{QU} \parallel \overline{DA}$; $\overline{QD} \cong \overline{UA}$; $m\angle Q = m\angle U = 115$ isosc. trap.