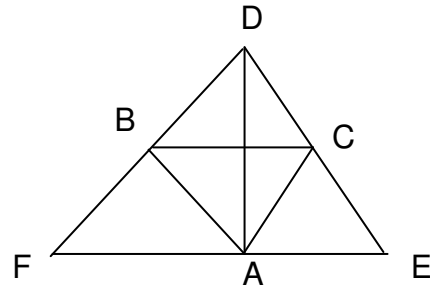


Geometry Worksheet  
5-4 to 5-5

1. Given  $\overline{AD}$  is an altitude of  $\triangle FED$ ;  
B and C are midpoints of  $\overline{FD}$  and  $\overline{DE}$  respectively;  
 $AF = 10$ ,  $FE = 24$ ,  
 $AC = 7$ ,  $BD = 6$ .

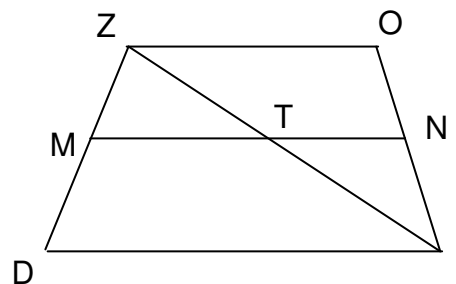


$FD = \underline{\hspace{2cm}}$   $DE = \underline{\hspace{2cm}}$  Perim of  $\triangle ABC = \underline{\hspace{2cm}}$  Perim of  $\triangle FED = \underline{\hspace{2cm}}$

2. Give the most descriptive name for quad MNOP with each indicated quality

- a)  $\overline{MN} \cong \overline{PO}$ ;  $\overline{MN} \parallel \overline{PO}$   
b)  $\overline{MN} \parallel \overline{PO}$ ;  $\overline{NO} \parallel \overline{MP}$ ;  $\overline{MO} \perp \overline{NP}$   
c)  $\angle M \cong \angle N \cong \angle O \cong \angle P$   
d) MNOP is a rectangle with  $MN = NO$

3. Given  $\overline{MN}$  is the median of trapezoid ZOID.



- a) The bases of ZOID are  $\underline{\hspace{2cm}}$  and  $\underline{\hspace{2cm}}$   
b) If  $ZO = 8$  and  $MN = 11$  then  $DI = \underline{\hspace{2cm}}$   
c) If  $ZO = 8$  then  $TN = \underline{\hspace{2cm}}$

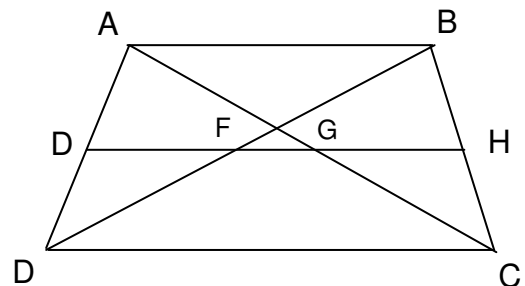
4. Given  $\overline{AB} \parallel \overline{CD}$ ; E and H are midpoints

- a)  $AB = 12$ ,  $CD = 20$ ,  $EH = \underline{\hspace{2cm}}$   $EF = \underline{\hspace{2cm}}$   
 $FG = \underline{\hspace{2cm}}$   $GH = \underline{\hspace{2cm}}$

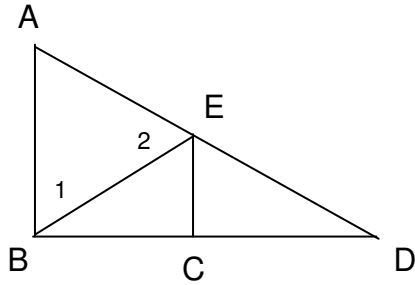
- b)  $FG = 3$ ,  $GH = 5$ ,  $AB = \underline{\hspace{2cm}}$   $CD = \underline{\hspace{2cm}}$   
 $EF = \underline{\hspace{2cm}}$

- c)  $AG = 4x - 2$ ,  $GC = 3x + 1$ ,  $x = \underline{\hspace{2cm}}$

- d)  $AB = 3x + 1$ ,  $CD = 5x - 1$ ,  $EH = 6x - 10$ ,  
 $EH = \underline{\hspace{2cm}}$   $FG = \underline{\hspace{2cm}}$



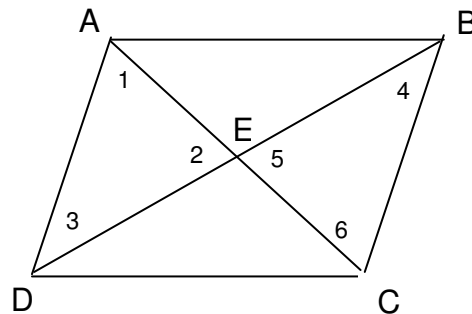
5.



Given:  $\overline{AB} \perp \overline{BC}$ ;  $\angle 1 \cong \angle 2$   
 E and C are midpoints;  $BE = 4$

Find AB, AD and CE.

6. Given:  $\overline{AD} \parallel \overline{BC}$ ,  $BE = DE$   
 Prove: ABCD is a parallelogram

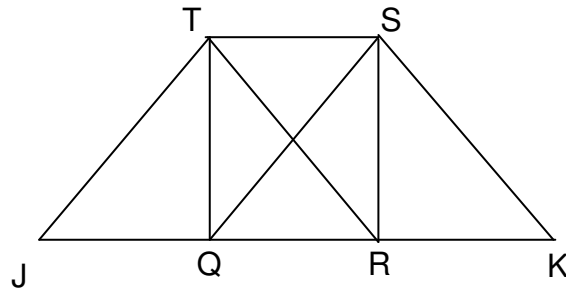


7. Given: Rectangle QRST  
 $\square$  RKST

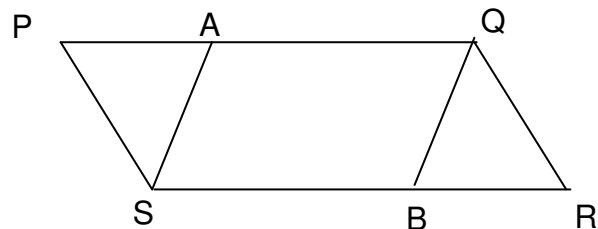
Prove:  $\triangle QSK$  is isosceles

8. Given: Rectangle QRST  
 $\square$  RKST,  $\square$  JQST

Prove:  $\overline{JT} \cong \overline{KS}$



9. Given:  $\square$  PQRS;  $PA = RB$   
 Prove:  $AS = BQ$ .



10. Given:  $\square$  PQRS;  $PA = RB$ ,  $AQ = SB$   
 Prove: ASBQ is a  $\square$

Answers:

1. FD= 12 DE= 14 ABC=25 FED 50

2. a) Parallelogram b) Rhombus c) Rectangle d) Square

3. a) ZO and ID b) 14 c) 4

4. a) EH= 16 EF= 6 FG= 4 GH= 6  
b) AB= 10 CD= 16 EF= 5  
c) 3  
d) EH= 20 FG= 4

5. AB= 4 AD= 8 CE= 2

6.

Given

VAT

PAIC

ASA

CPCTC

If diag bisect then quad is a parallelogram

7.

Given

Opp sides congruent

Diag of Rect congruent

Subst

Def ISO triangle

8.

Given

Opp sides congruent

Diag of Rect congruent

Subst

9.

Given

Opp Sides congruent

Opp angles congruent

SAS

CPCTC

10.

Given

Opp sides congruent

Opp angles congruent

SAS

CPCTC and If both pairs of oppsides congruent then quad is parallelogram.