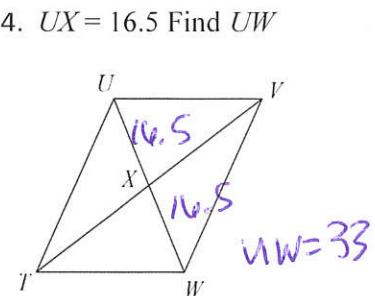
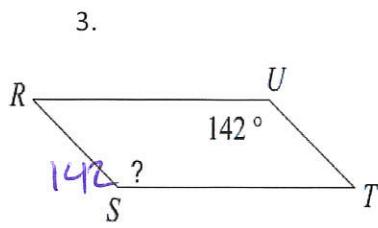
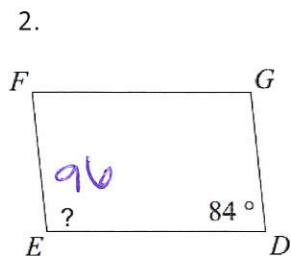
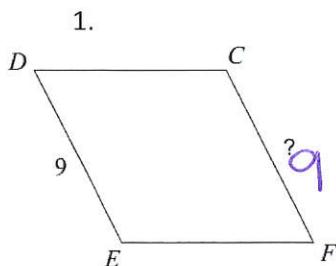


# Standard 7A & 7B Review

Name \_\_\_\_\_ Hour 1 2 3 4 5

Find the measurement indicated in each parallelogram.



Solve for the variable. Each figure is a Parallelogram.

5.

$$-1 + 27x + 100 = 180$$

$$27x + 99 = 180$$

$$27x = 81$$

$$\boxed{x=3}$$

6.

$$15x + 5 = 16x$$

$$\boxed{5 = x}$$

7.  $6y + 1 = 4y + 9$

$$2y + 1 = 9$$

$$2y = 8$$

$$\boxed{y=4}$$

$$2x - 5 = x + 7$$

$$x - 5 = 7$$

$$\boxed{x=12}$$

8.  $-6 + 2x = x + 3$

$$-6 + x = 3$$

$$\boxed{x=9}$$

9.  $3y + y = 180$

$$4y = 180$$

$$\boxed{y=45}$$

$$135 + 3x = 180$$

$$3x = 45$$

$$\boxed{x=15}$$

Find the measures of the numbered angles for each parallelogram.

10.

triangle sum

$$78 + 48 + \angle 3 = 180$$

$$126 + \angle 3 = 180$$

$$\boxed{\angle 3 = 54}$$

11.

$\angle 1 \cong \angle 3$   
alt. int.  $\angle$ 's

$$\boxed{\angle 1 = 60}$$

$$60 + \angle 2 + 60 = 180$$

$$\boxed{\angle 2 = 60}$$

12.

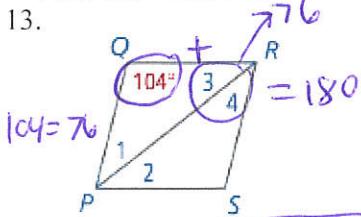
$\angle 3 = 22$
$\angle 2 = 45$
$\angle 1 = 113$

# Standard 7A & 7B Review

Name \_\_\_\_\_ Hour 1 2 3 4 5

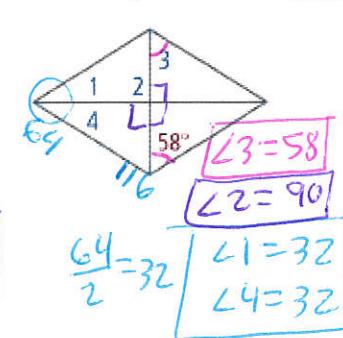
diagonals are  $\perp$  and bisect opposite  $\angle$ 's

Find the measures of the numbered angles in each rhombus.

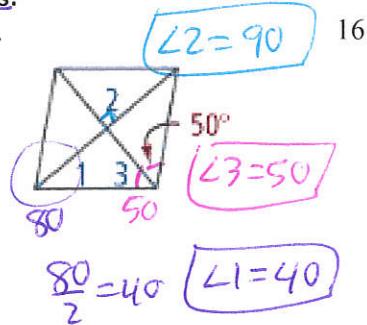


$$180 - 104 = 76$$

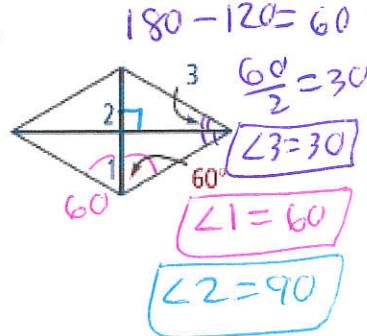
$$\frac{76}{2} = 38 \quad \begin{cases} \angle 3 = 38 \\ \angle 4 = 38 \\ \angle 1 = 38 \\ \angle 2 = 38 \end{cases}$$



$$\frac{64}{2} = 32 \quad \begin{cases} \angle 1 = 32 \\ \angle 4 = 32 \end{cases}$$

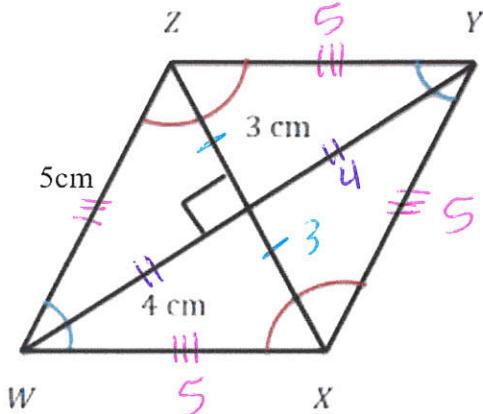


$$\frac{80}{2} = 40 \quad \begin{cases} \angle 1 = 40 \\ \angle 4 = 40 \end{cases}$$



$$\begin{aligned} 180 - 120 &= 60 \\ \frac{60}{2} &= 30 \\ \angle 3 &= 30 \\ \angle 1 &= 60 \\ \angle 2 &= 90 \end{aligned}$$

17. Find the given lengths in the rhombus below.



- a)  $\overline{ZY} = \underline{\hspace{2cm}} 5$   
 b)  $\overline{XZ} = \underline{\hspace{2cm}} 6$   
 c)  $\overline{WY} = \underline{\hspace{2cm}} 8$   
 d)  $\overline{WX} = \underline{\hspace{2cm}} 5$

LMNO is a rectangle. Find the following. all  $\angle$ 's are  $90^\circ$  and diagonals are  $\cong$

For 18 and 19. Find the value of x and the length of each diagonal.

18.  $LN = 5x - 8$  and  $MO = 2x + 1$

$$\begin{aligned} 5x - 8 &= 2x + 1 \\ 3x - 8 &= 1 \end{aligned}$$

$$x = 3$$

diagonals = 7

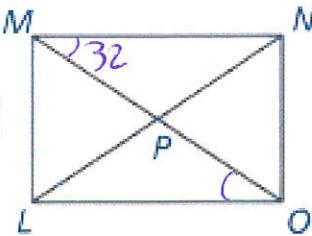
19.  $LN = 3x + 1$  and  $MO = 8x - 4$

$$3x + 1 = 8x - 4$$

$$5 = 5x$$

$$\begin{aligned} x &= 1 \\ \text{diagonals} &= 4 \end{aligned}$$

20. Find the measure of  $\angle M$   $\underline{\hspace{2cm}} 90^\circ$



21. Given the measure of  $\angle NMO$  is  $32^\circ$ .

a) Find the measure of  $\angle LMO$   $\underline{\hspace{2cm}} 58^\circ$   $90 - 32 = 58$

b) Find the measure of  $\angle LOM$   $\underline{\hspace{2cm}} 58^\circ$

22. ABCD is a square.

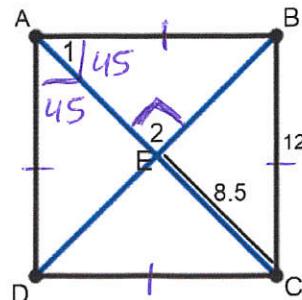
a) Find the measure of angle 2.  $\underline{\hspace{2cm}} 90^\circ$

b) Find the measure of angle 1.  $\underline{\hspace{2cm}} 45^\circ$

c) Find the length of side AB.  $\underline{\hspace{2cm}} 12$

d) Find the length of DB.

$$8.5 + 8.5 = \boxed{17}$$



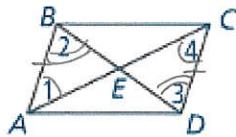
# Standard 7A & 7B Review

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23.

**Given:**  $\square ABCD$

**Prove:**  $\overline{AC}$  and  $\overline{BD}$  bisect each other at E.

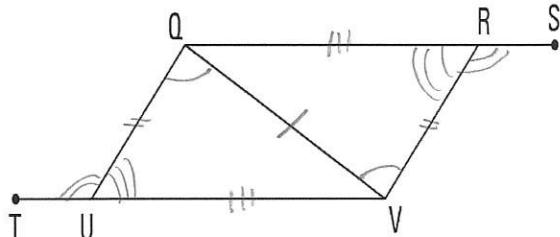


$\square = \text{parallelogram}$

Statements	Reasons
1) $ABCD$ is a parallelogram.	1) Given
2) $\overline{AB} \parallel \overline{DC}$	2) a. $\square$ opposite sides are $\parallel$
3) $\angle 1 \cong \angle 4; \angle 2 \cong \angle 3$	3) b. if lines are $\parallel$ alternate interior $\angle$ 's are $\cong$
4) $\overline{AB} \cong \overline{DC}$	4) c. $\square$ opposite sides are $\cong$
5) d. $\triangle ABE \cong \triangle CDE$	5) ASA
6) $\overline{AE} \cong \overline{CE}; \overline{BE} \cong \overline{DE}$	6) e. CPCTC
7) f. $\overline{AC}$ and $\overline{BD}$ bisect each other at E	7) Definition of bisector

24. Given:  $\angle UQV \cong \angle RVQ$   
 $\angle TUQ \cong \angle SRV$

Prove:  $QRVU$  is a parallelogram

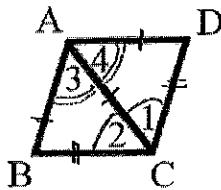


Statement	Reason
1. $\angle UQV \cong \angle RVQ$ $\angle TUQ \cong \angle SRV$	1. Given
2. $m\angle TUQ + m\angle QUV = 180^\circ$ $m\angle SRV + m\angle QRV = 180^\circ$	2. linear pairs are supplementary
3. $m\angle TUQ + m\angle QUV = m\angle SRV + m\angle QRV$	3. transitive P.
4. $m\angle TUQ + m\angle QUV = m\angle TUQ + m\angle QRV$	4. Substitution P.
5. $m\angle QUV \cong m\angle QRV$	5. subtraction P.
6. $\overline{QV} \cong \overline{QV}$	6. reflexive P.
7. $\triangle UQV \cong \triangle RVQ$	7. AAS
8. $\overline{UQ} \cong \overline{RV}, \overline{UV} \cong \overline{RQ}$	8. CPCTC
9. $QRVU$ is a parallelogram	9. Converse of opposite sides in a $\square$ are $\cong$ or if both sets of opposite sides are $\cong$ it's a $\square$

# Standard 7A & 7B Review

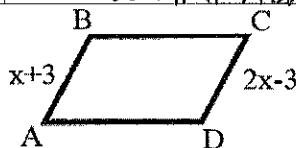
Name \_\_\_\_\_ Hour 1 2 3 4 5

25. Given:  $ABCD$  is a parallelogram  
 $\overline{AC}$  bisects  $\angle BAD$  and  $\angle BCD$   
 Prove:  $ABCD$  is a rhombus



Statement	Reason
1. $\overline{AC}$ bisects $\angle BAD$ and $\angle BCD$	1. Given
2. $\angle 1 \cong \angle 2$ and $\angle 3 \cong \angle 4$	2. definition of an $\angle$ bisector
3. $\overline{AC} \cong \overline{AC}$	3. reflexive Property
4. $\triangle ABC \cong \triangle ADC$	4. ASA
5. $\overline{AB} \cong \overline{AD}$ and $\overline{BC} \cong \overline{CD}$	5. CPCTC
6. $ABCD$ is a parallelogram	6. Given
7. $\overline{AB} \cong \overline{CD}$ and $\overline{BC} \cong \overline{AD}$	7. opposite sides are $\cong$ in a $\square$
8. $\overline{AB} \cong \overline{AD} \cong \overline{BC} \cong \overline{CD}$	8. Substitution P.
9. $ABCD$ is a rhombus	9. definition of a Rhombus

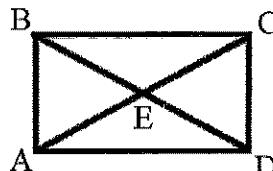
26. Given:  $ABCD$  is a parallelogram  
 Prove:  $x = 6$



Statement	Reason
1. $ABCD$ is a parallelogram	1. Given
2. $\overline{AB} \cong \overline{DC}$	2. in a $\square$ opposite sides are $\cong$
3. $AB = DC$	3. if segments are $\cong$ their lengths are $=$
4. $x + 3 = 2x - 3$	4. Substitution P.
5. $3 = x - 3$	5. Subtraction P.
6. $6 = x$	6. Addition P.
7. $x = 6$	7. Symmetric P.

27. Given:  $ABCD$  is a rectangle  
 $AC = 7y - 19$   
 $BD = 5y + 1$

Prove:  $y = 10$



Statement	Reason
1. $ABCD$ is a rectangle	1. Given
2. $\overline{AC} \cong \overline{BD}$	2. Diagonals in a rectangle are $\cong$
3. $AC = BD$	3. Definition of congruence
4. $AC = 7y - 19$ , $BD = 5y + 1$	4. Given
5. $7y - 19 = 5y + 1$	5. Substitution P.
6. $2y - 19 = 1$	6. Subtraction P.
7. $2y = 20$	7. Addition P.
8. $y = 10$	8. Division P.