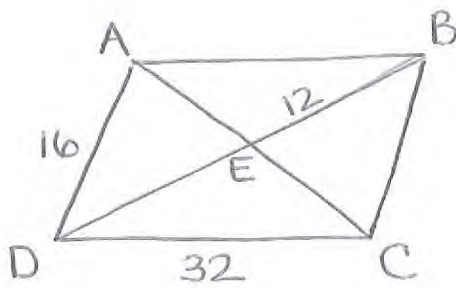


Unit 1 Review Practice

① ABCD is a parallelogram.



$\overline{AC} = 20$
 $m\angle DAB = 112^\circ$

Find:

AB = _____

BC = _____

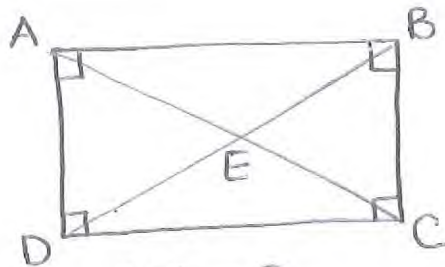
DE = _____

AE = _____

$m\angle ABC =$ _____

$m\angle DCB =$ _____

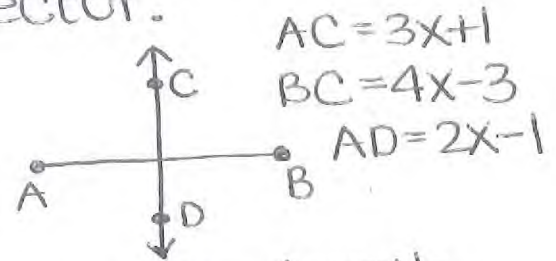
②



$BE = 8$

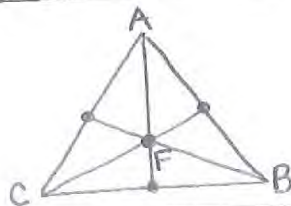
$AC =$ _____

③ \overleftrightarrow{CD} is a perpendicular bisector.

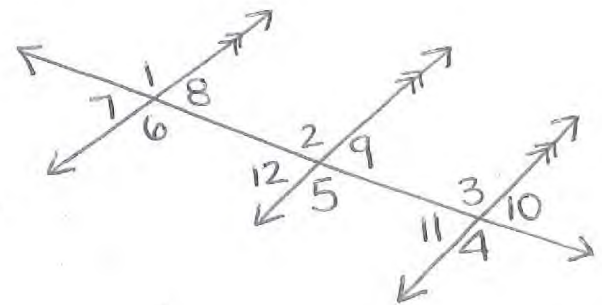


what is the length of AC?

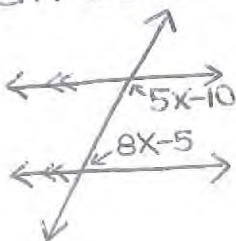
④ In $\triangle ABC$, the medians meet at common point, point F. Point F is called the _____ of $\triangle ABC$.



⑤ List the angles that are congruent to $\angle 5$.



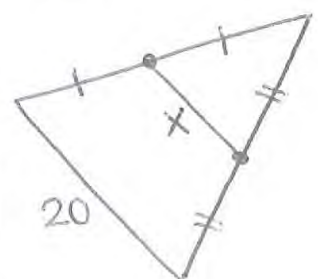
⑥ solve for X. state the theorem used.



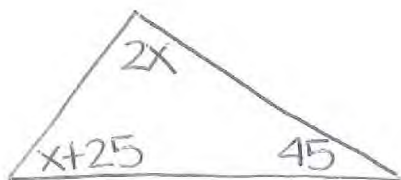
⑦ Find X.



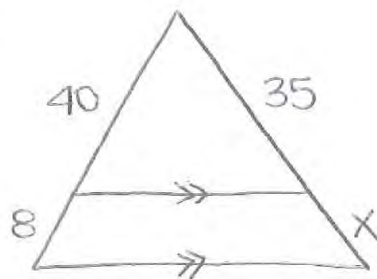
⑧ Find X.



9 Find x.



10



Find x.

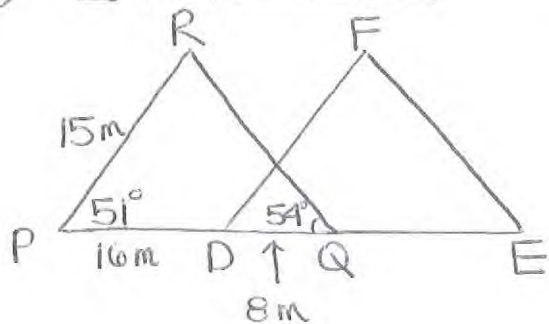
11 $\triangle LMN \cong \triangle XYZ$

a) $\overline{LM} \cong$ _____

b) $\angle XZY \cong$ _____

c) $\overline{FE} \cong$ _____

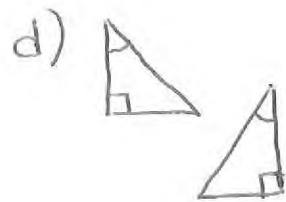
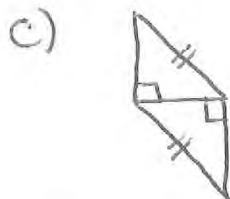
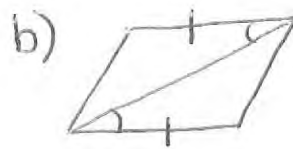
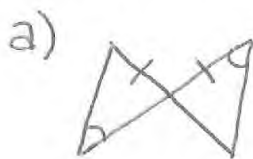
12 $\triangle PQR \cong \triangle DEF$



$m\angle R =$ _____ $\overline{FD} =$ _____

$m\angle E =$ _____ $\overline{DE} =$ _____

13 Are the triangles congruent? If so, state how you know.



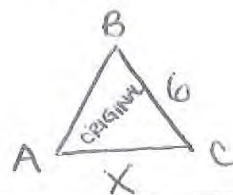
14 Dilate triangle LMN by a scale factor of $\frac{1}{2}$.

$L(6, 4)$ $L'(\text{---}, \text{---})$

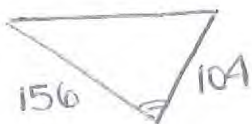
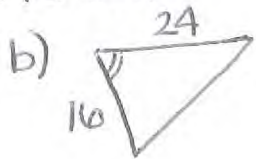
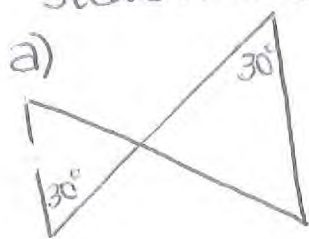
$M(-8, 0)$ $M'(\text{---}, \text{---})$

$N(2, -4)$ $N'(\text{---}, \text{---})$

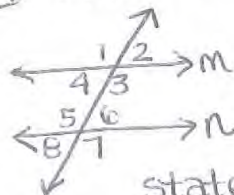
15 $\triangle ABC \sim \triangle DEF$
state the scale factor and find x.



16 Are the triangles similar? If so, show your work and state how you know.



17 Fill in the blanks of the proof.



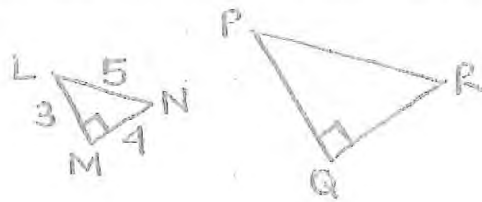
Given: $m \parallel n$

Prove: $\angle 4 \cong \angle 6$

statement	Reason
	Given
$\angle 4 \cong \angle 8$	
$\angle 8 \cong \angle 6$	
$\angle 4 \cong \angle 6$	

Unit 2 Review Practice

① $\triangle LMN \sim \triangle PQR$



a) $\sin P = \underline{\hspace{2cm}}$

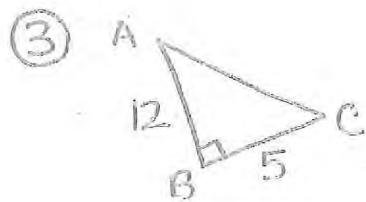
b) $\tan R = \underline{\hspace{2cm}}$

write the ratio as a decimal to 2 places.

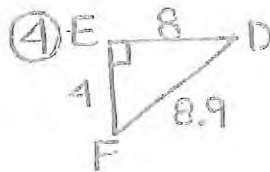
c) $\sin R$ is congruent to what 3 trig ratios?

② a) $\sin 29^\circ = \cos \underline{\hspace{1cm}}^\circ$

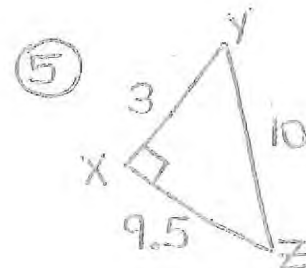
b) $\cos 43^\circ = \sin \underline{\hspace{1cm}}^\circ$



$\cos A = \underline{\hspace{2cm}}$

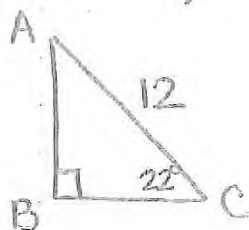


$\tan D = \underline{\hspace{2cm}}$



$\sin Z = \underline{\hspace{2cm}}$

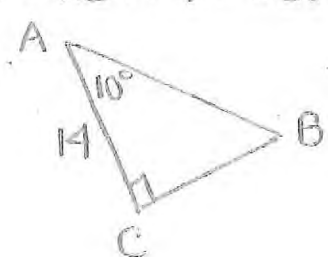
⑥ Find \overline{AB} , + $\angle A$.



⑦ Find \overline{AB} , + $\angle C$.



⑧ Find \overline{AB} , + \overline{BC} .

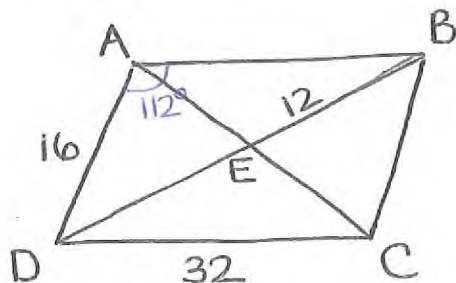


⑨ The world's most powerful lighthouse is 50 meters tall. Suppose you are in a boat just off the coast, and the angle of elevation from the boat to the top of the lighthouse is 12° . How far is your boat from the base of the lighthouse?

Unit 1 Review Practice

Key

① ABCD is a parallelogram.



$\overline{AC} = 20$
 $m\angle DAB = 112^\circ$

Find:

$AB = \underline{32}$

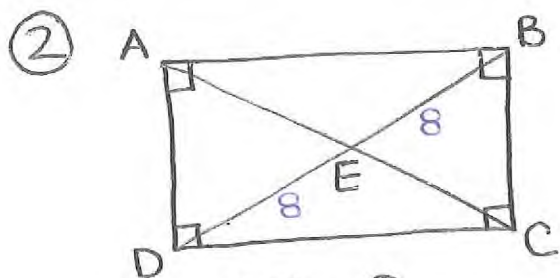
$BC = \underline{16}$

$DE = \underline{12}$

$AE = \underline{10}$

$m\angle ABC = \underline{68^\circ}$

$m\angle DCB = \underline{112^\circ}$

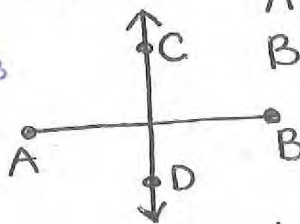


$BE = 8$
 $AC = \underline{16}$

③ \overleftrightarrow{CD} is a perpendicular bisector.

$3x+1 = 4x-3$
 $-3x+3 \quad -3x+3$
 $4 = x$

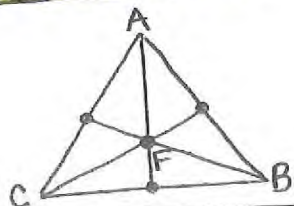
$AC = 3(4)+1$
 $\underline{AC = 13}$



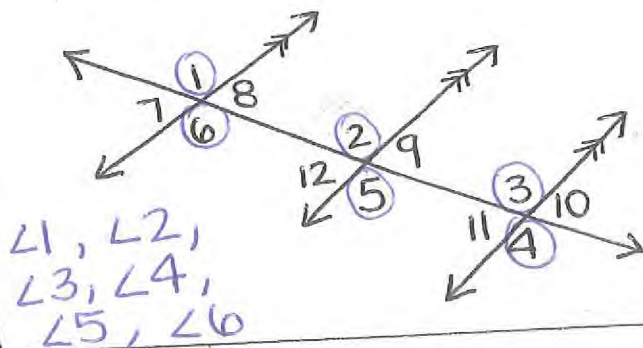
$AC = 3x+1$
 $BC = 4x-3$
 $AD = 2x-1$

What is the length of AC?

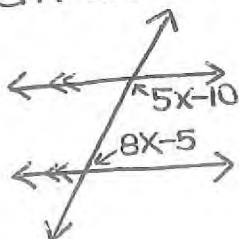
④ In $\triangle ABC$, the medians meet at common point, point F. Point F is called the centroid of $\triangle ABC$.



⑤ List the angles that are congruent to $\angle 5$.



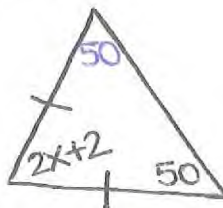
⑥ Solve for x. State the theorem used.



Same-Side Interior Angles POS.

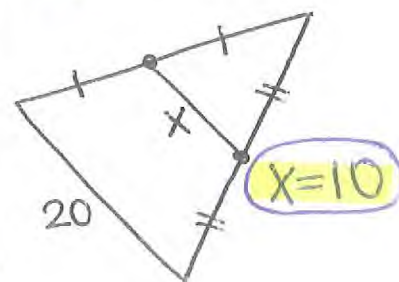
$5x-10+8x-5=180$
 $13x-15=180$
 $13x=195$
 $\underline{X=15}$

⑦ Find x.

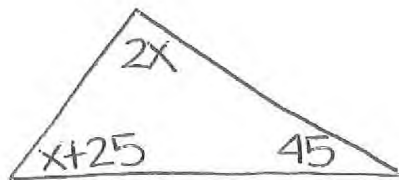


$2x+2+50+50=180$
 $2x=78$
 $\underline{X=39}$

⑧ Find x.



9 Find x.

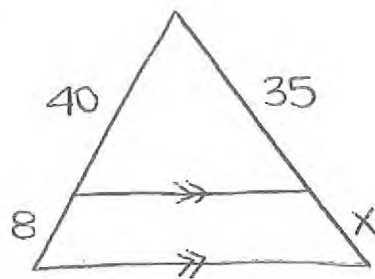


$$2x + x + 25 + 45 = 180^\circ$$

$$3x + 70 = 180^\circ$$

$$3x = 110 \quad x = 36.7$$

10



Find x.

$$\frac{40}{8} = \frac{35}{x} \quad 40x = 280$$

$$x = 7$$

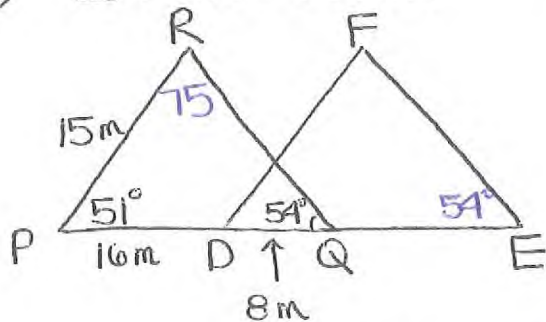
11 $\triangle LMN \cong \triangle XYZ$

a) $\overline{LM} \cong \underline{XY}$

b) $\angle XZY \cong \underline{\angle L M}$

c) $\overline{FE} \cong \underline{\hspace{2cm}}$

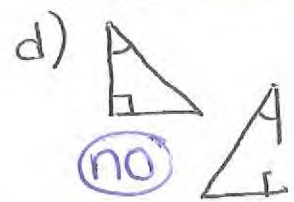
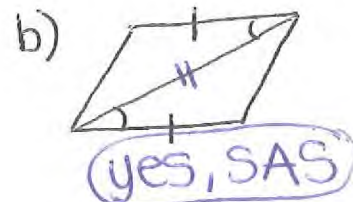
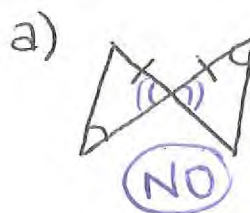
12 $\triangle PQR \cong \triangle DEF$



$$m\angle R = 75^\circ \quad \overline{FD} = 15m$$

$$m\angle E = 54^\circ \quad \overline{DE} = 24m$$

13 Are the triangles congruent? If so, state how you know.



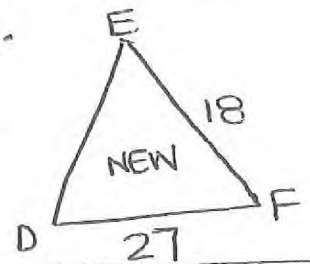
14 Dilate triangle LMN by a scale factor of $\frac{1}{2}$.

$$L(6, 4) \quad L'(3, 2)$$

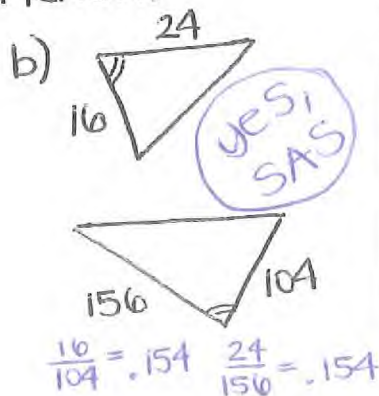
$$M(-8, 0) \quad M'(-4, 0)$$

$$N(2, -4) \quad N'(1, -2)$$

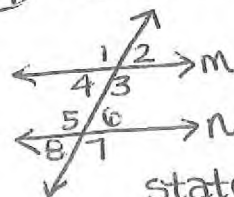
15 $\triangle ABC \sim \triangle DEF$
state the scale factor and find x.



16 Are the triangles similar? If so, show your work and state how you know.



17 Fill in the blanks of the proof.



Given: $m \parallel n$
Prove: $\angle 4 \cong \angle 6$

statement	Reason
$m \parallel n$	Given
$\angle 4 \cong \angle 8$	Corresponding \rightarrow
$\angle 8 \cong \angle 6$	Vertical \angle s
$\angle 4 \cong \angle 6$	Transitive Prop

Unit 2 Review Practice

Key

① $\triangle LMN \sim \triangle PQR$



a) $\sin P = \frac{4}{5} = 0.8$
 b) $\tan R = \frac{3}{4} = 0.75$

write the ratio as a decimal to 2 places.

c) $\triangle LMN$ is congruent to what 3 trig ratios?
 $\cos P, \sin N, \cos L$

② a) $\sin 29^\circ = \cos 61^\circ$

b) $\cos 43^\circ = \sin 47^\circ$

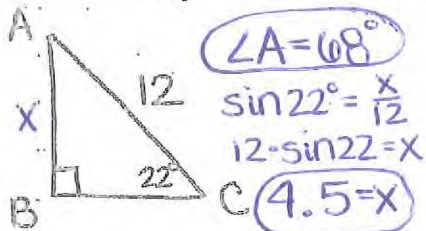
③ $12^2 + 5^2 = c^2$
 $169 = c^2$
 $13 = c$

$\cos A = \frac{12}{13}$

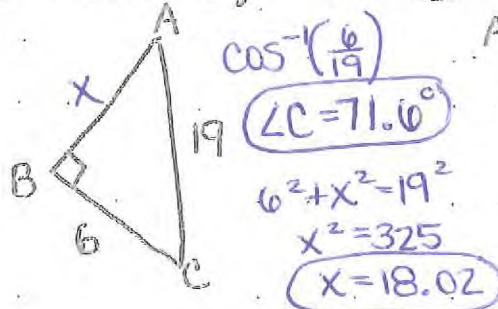
④ $\tan D = \frac{4}{8}$

⑤ $\sin Z = \frac{3}{10}$

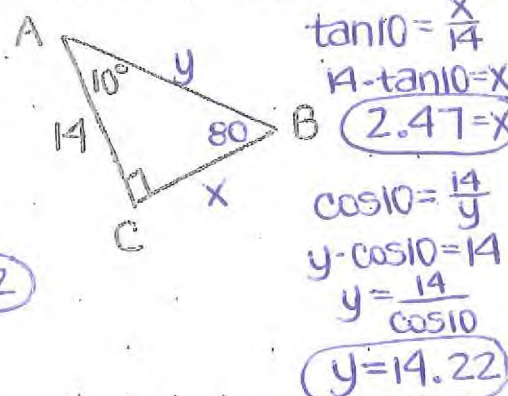
⑥ Find \overline{AB} , + $\angle A$.



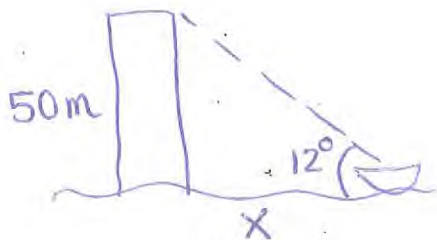
⑦ Find \overline{AB} , + $\angle C$.



⑧ Find \overline{AB} , + \overline{BC} .



⑨ The world's most powerful lighthouse is 50 meters tall. Suppose you are in a boat just off the coast, and the angle of elevation from the boat to the top of the lighthouse is 12° . How far is your boat from the base of the lighthouse?



$\tan 12^\circ = \frac{50}{x}$
 $x \cdot \tan 12^\circ = 50$
 $x = \frac{50}{\tan 12^\circ}$
 $x = 235.2 \text{ m}$