

Adv. Geometry 3.2

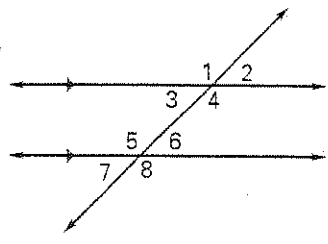
Name Key

Find the angle measure. Tell which postulate or theorem you use.

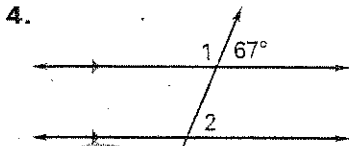
1. If $m\angle 1 = 114^\circ$, then $m\angle 5 = ?$ 114°

2. If $m\angle 3 = 68^\circ$, then $m\angle 6 = ?$ 68°

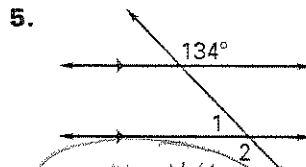
3. If $m\angle 7 = 64^\circ$, then $m\angle 2 = ?$ 64°



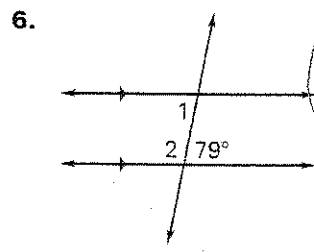
Find $m\angle 1$ and $m\angle 2$.



$m\angle 1 = 113^\circ$
 $m\angle 2 = 67^\circ$

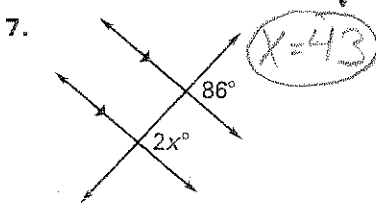


$m\angle 1 = 46^\circ$
 $m\angle 2 = 134^\circ$

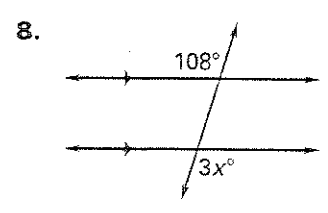


$m\angle 1 = 79^\circ$
 $m\angle 2 = 101^\circ$

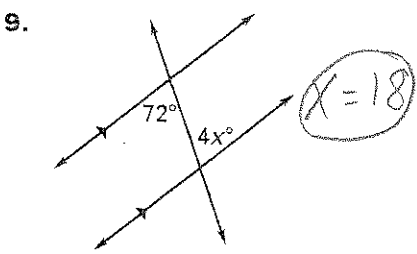
Find the value of x and y .



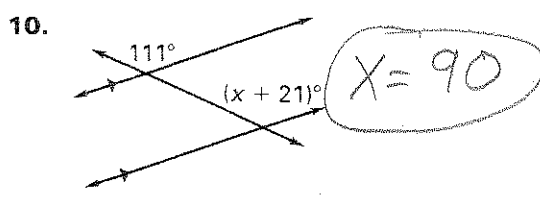
$x = 43$



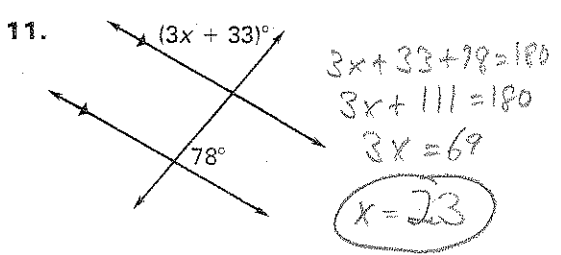
$x = 36$



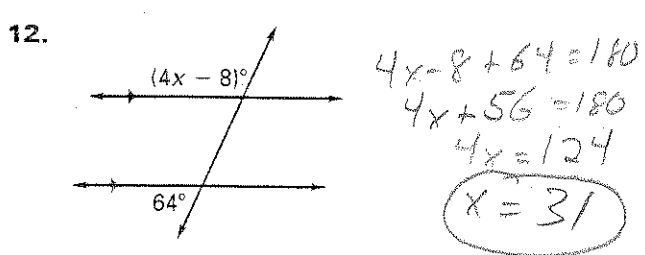
$x = 18$



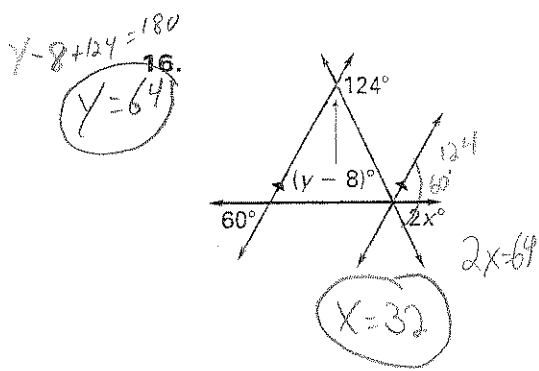
$x = 90$



$3x + 33 + 78 = 180$
 $3x + 111 = 180$
 $3x = 69$
 $x = 23$

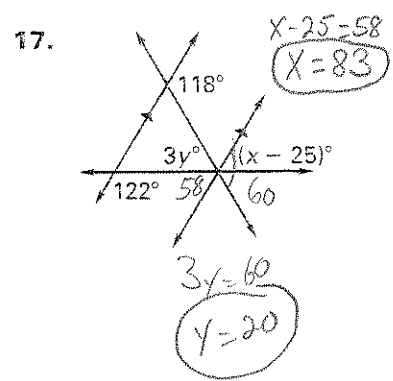


$4x - 8 + 64 = 180$
 $4x + 56 = 180$
 $4x = 124$
 $x = 31$



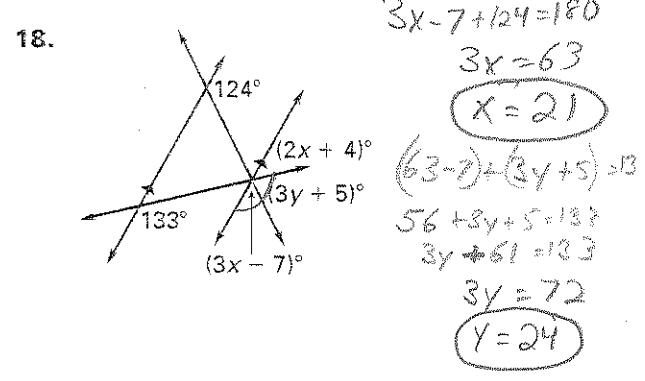
$y - 8 + 124 = 180$
 $y = 64$

$x = 32$



$x - 25 = 58$
 $x = 83$

$3y = 60$
 $y = 20$

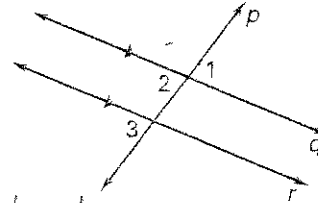


$3x - 7 + 124 = 180$
 $3x = 63$
 $x = 21$
 $(63 - 7) + (3y + 5) = 180$
 $56 + 3y + 5 = 180$
 $3y + 61 = 180$
 $3y = 72$
 $y = 24$

In Exercises 19 and 20, complete the two-column proof.

19. GIVEN: $q \parallel r$

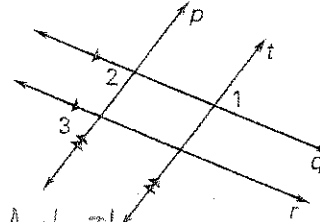
PROVE: $\angle 1 \cong \angle 3$



Statements	Reasons
1. $q \parallel r$	1. <u>Given</u>
2. $\angle 1 \cong \angle 2$	2. <u>? Vertical Angles Theorem</u>
3. $\angle 2 \cong \angle 3$	3. <u>? Corresponding Angles Postulate</u>
4. $\angle 1 \cong \angle 3$	4. <u>? Transitive</u>

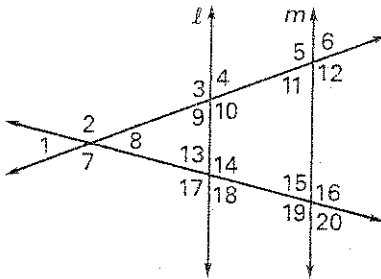
20. GIVEN: $q \parallel r, p \parallel t$

PROVE: $\angle 1 \cong \angle 3$

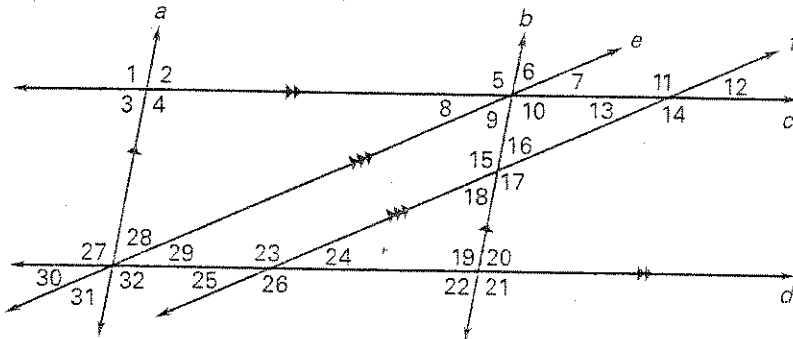


Statements	Reasons
1. $p \parallel t$	1. <u>? Given</u>
2. $\angle 1 \cong \angle 2$	2. <u>? Alternate Ext. Angles Theorem</u>
3. $q \parallel r$	3. <u>? Given</u>
4. $\angle 2 \cong \angle 3$	4. <u>? Corresponding Angles Postulate</u>
5. $\angle 1 \cong \angle 3$	5. <u>? Transitive</u>

2. GIVEN: $l \parallel m, m\angle 1 = 35^\circ$, and $m\angle 12 = 111^\circ$

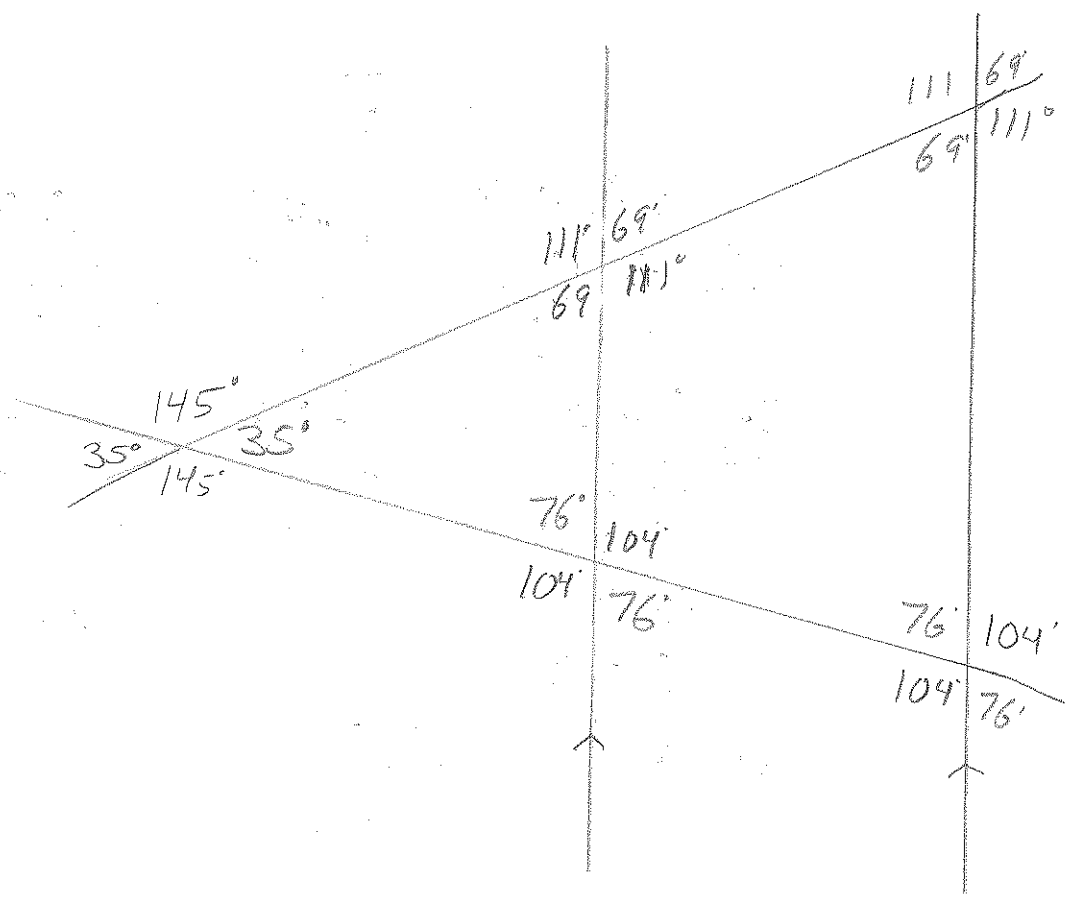


3. GIVEN: $a \parallel b, c \parallel d, e \parallel f, m\angle 7 = 24^\circ$, and $m\angle 20 = 80^\circ$



Find ALL the \angle 's

2



3

