Parallel Lines

Angle Information

Chapter 03

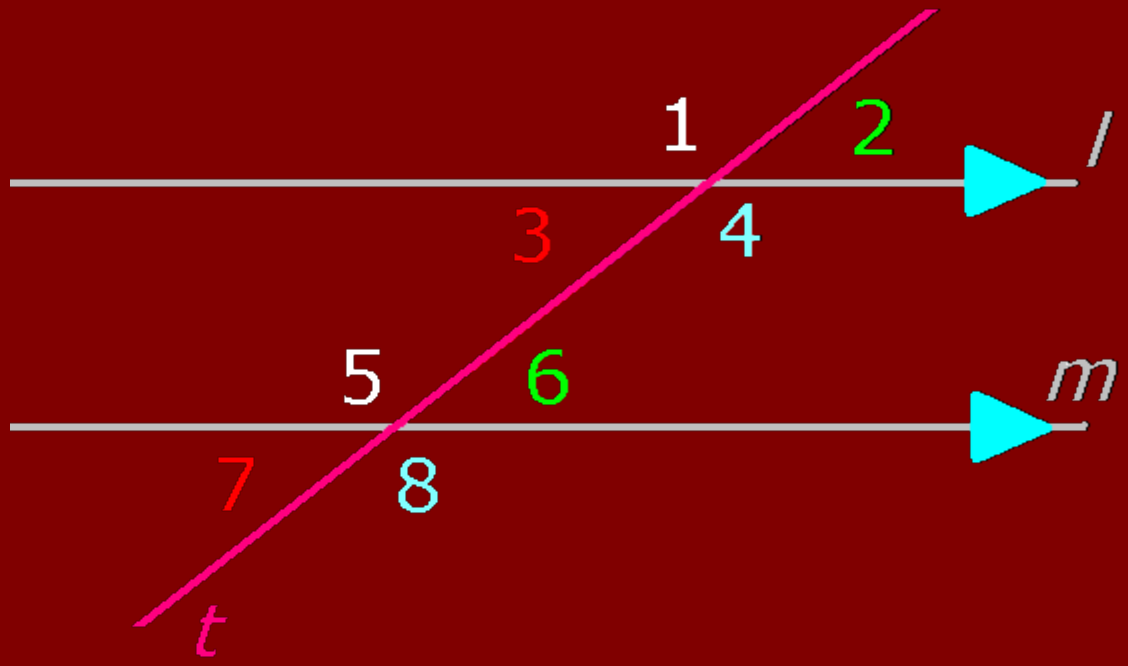
Geometry

A BowerPoint Presentation

If $\parallel$ lines, then corr $\angle$s $\cong$

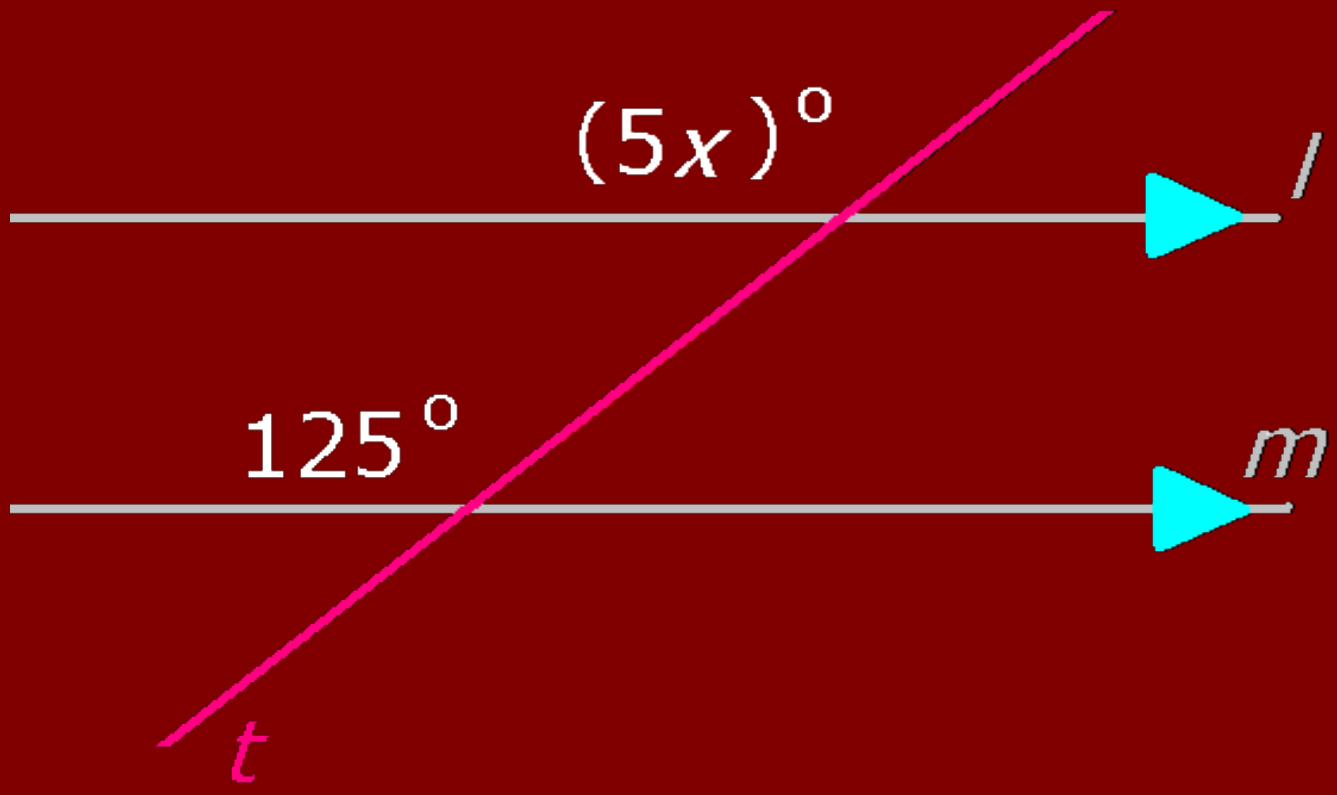
If $l \parallel m$

$\angle 1 \cong \angle 5$ $\angle 2 \cong \angle 6$ $\angle 3 \cong \angle 7$ $\angle 4 \cong \angle 8$



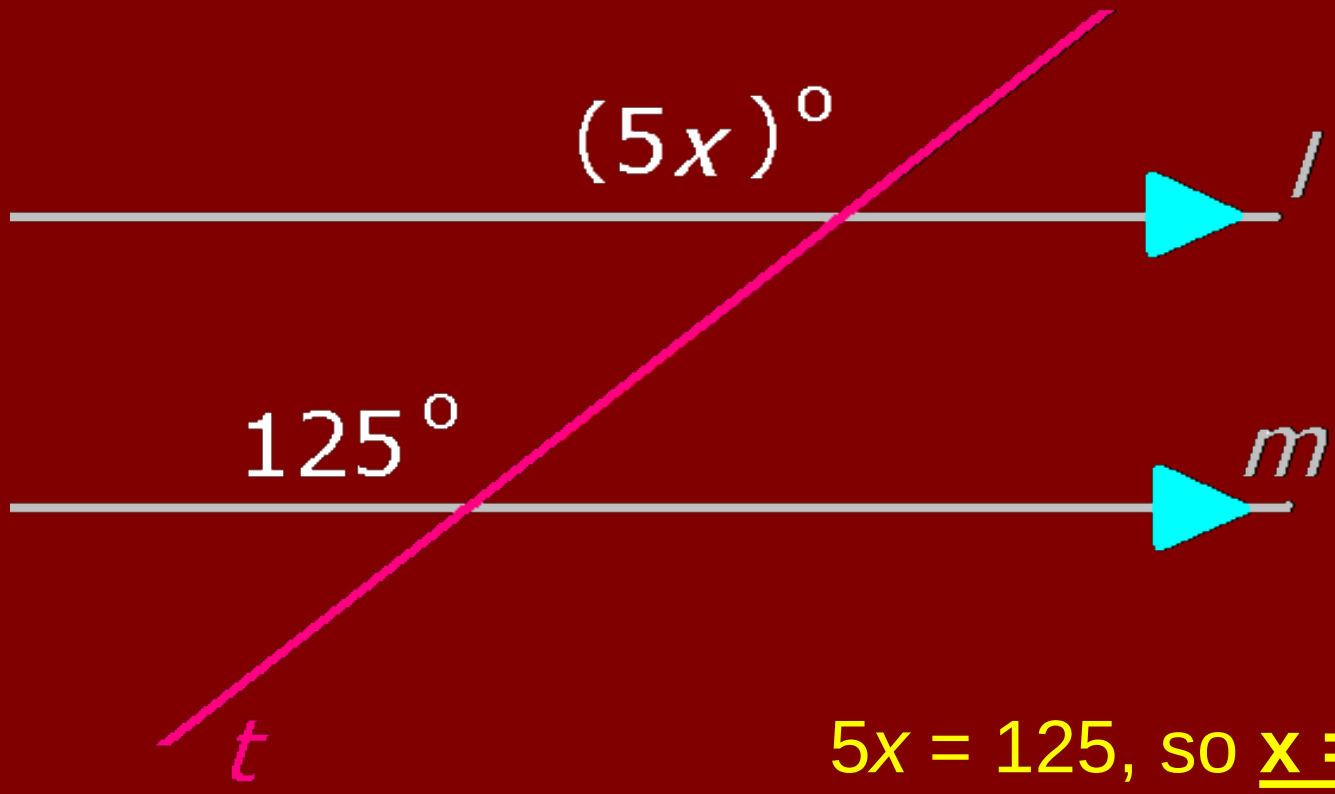
If $\parallel$ lines, then corr $\angle$ s $\cong$

Solve for *x*.



If || lines, then corr ∠ s ≅

Solve for *x*.

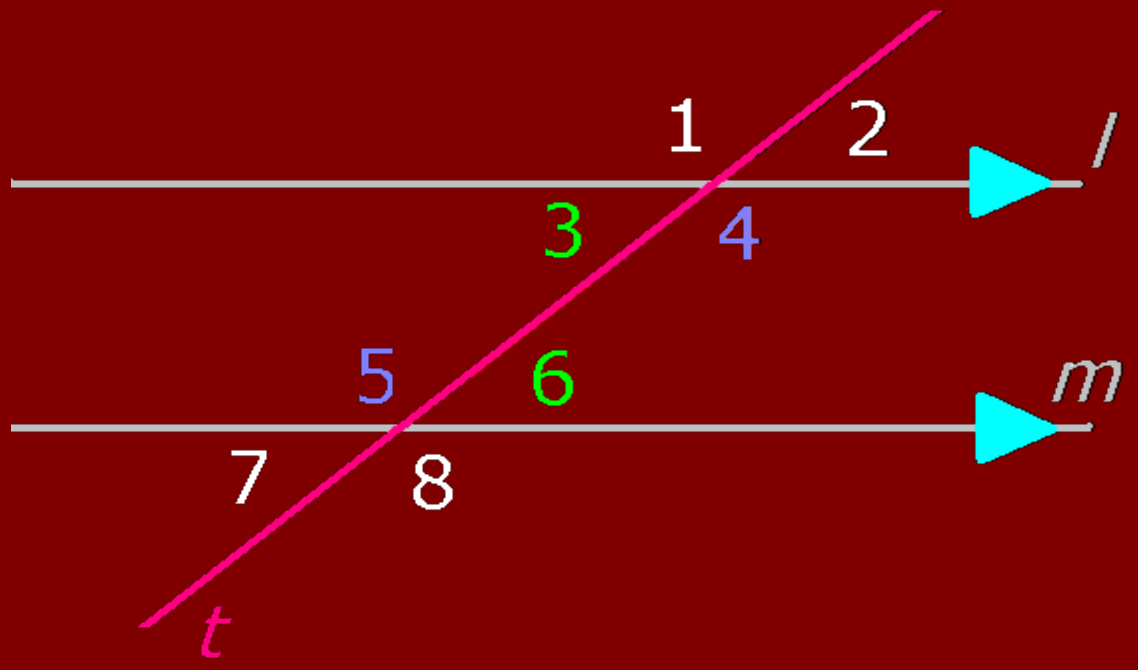


5*x* = 125, so **x = 25**

If $\parallel$ lines, then alt int $\angle$s $\cong$

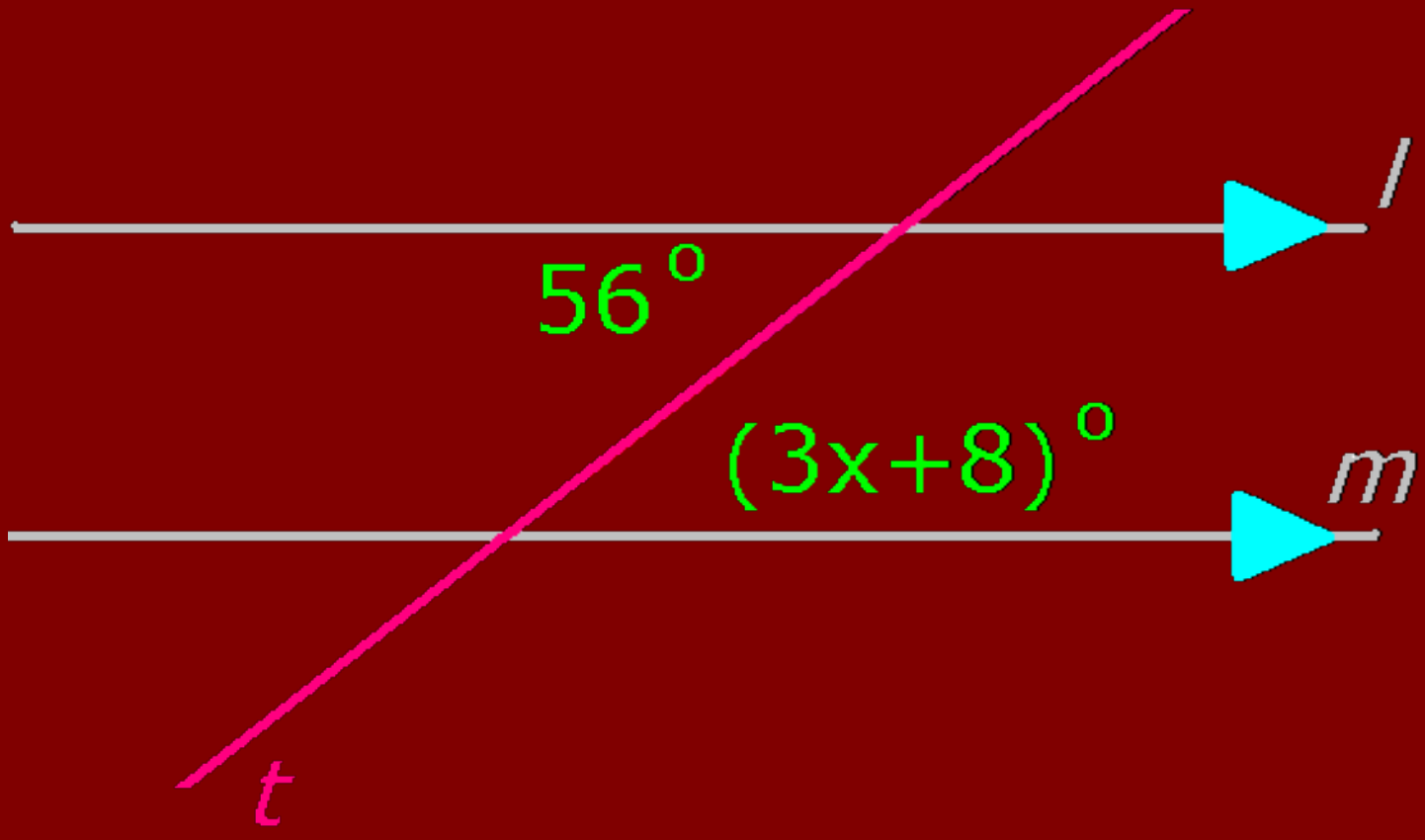
If $l \parallel m$

$\angle 3 \cong \angle 6$ & $\angle 4 \cong \angle 5$



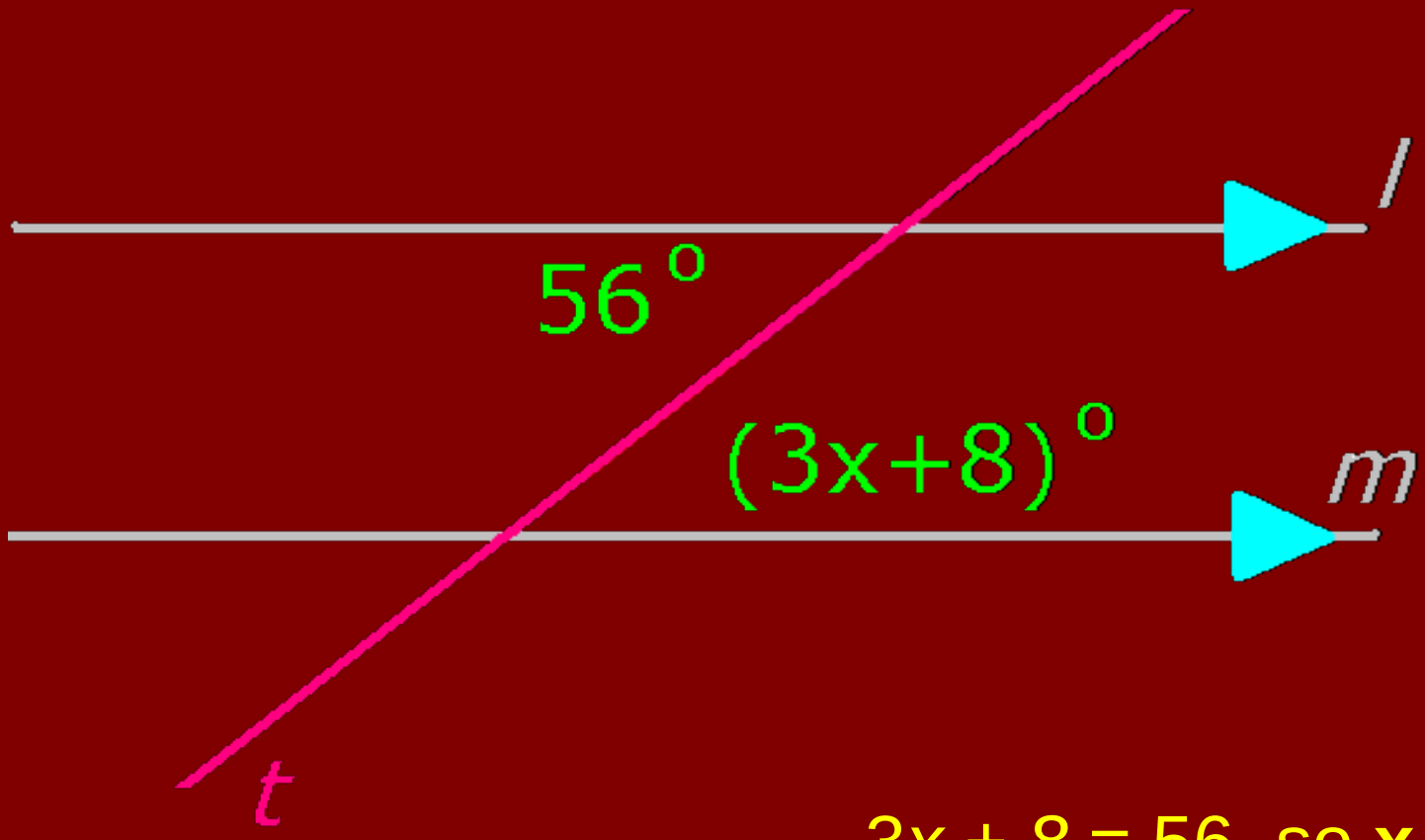
If $\parallel$ lines, then alt int $\angle$s $\cong$

Solve for *x*.



If $\parallel$ lines, then alt int $\angle$s $\cong$

Solve for *x*.

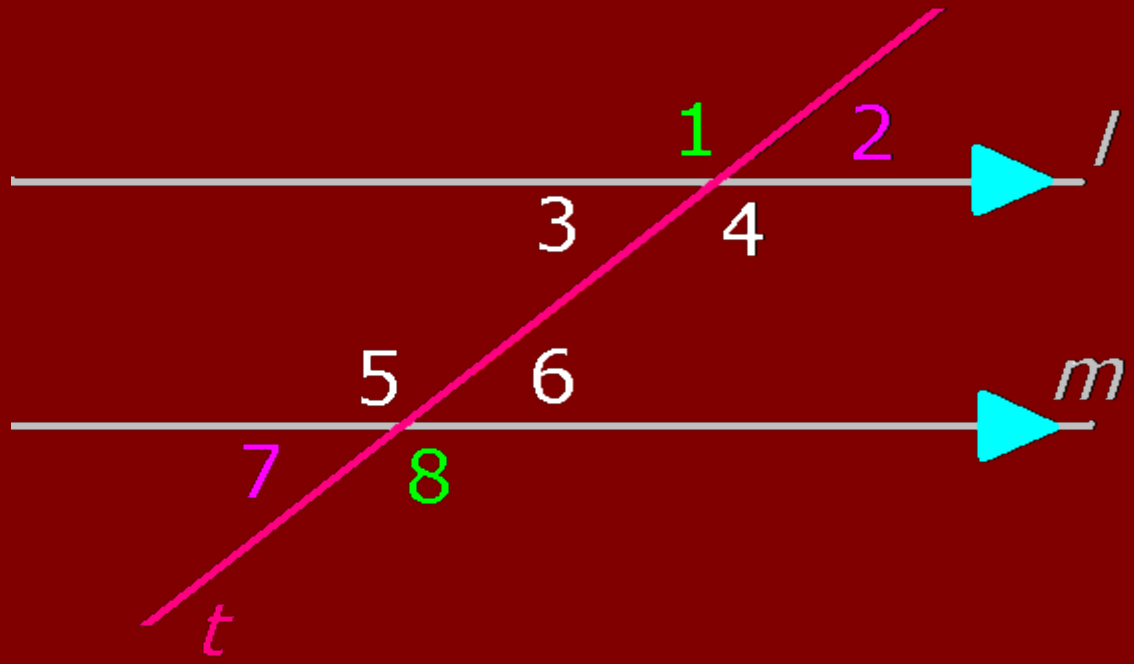


$3x + 8 = 56$, so **<u>x = 16</u>**

If $\parallel$ lines, then alt ext $\angle$ s $\cong$

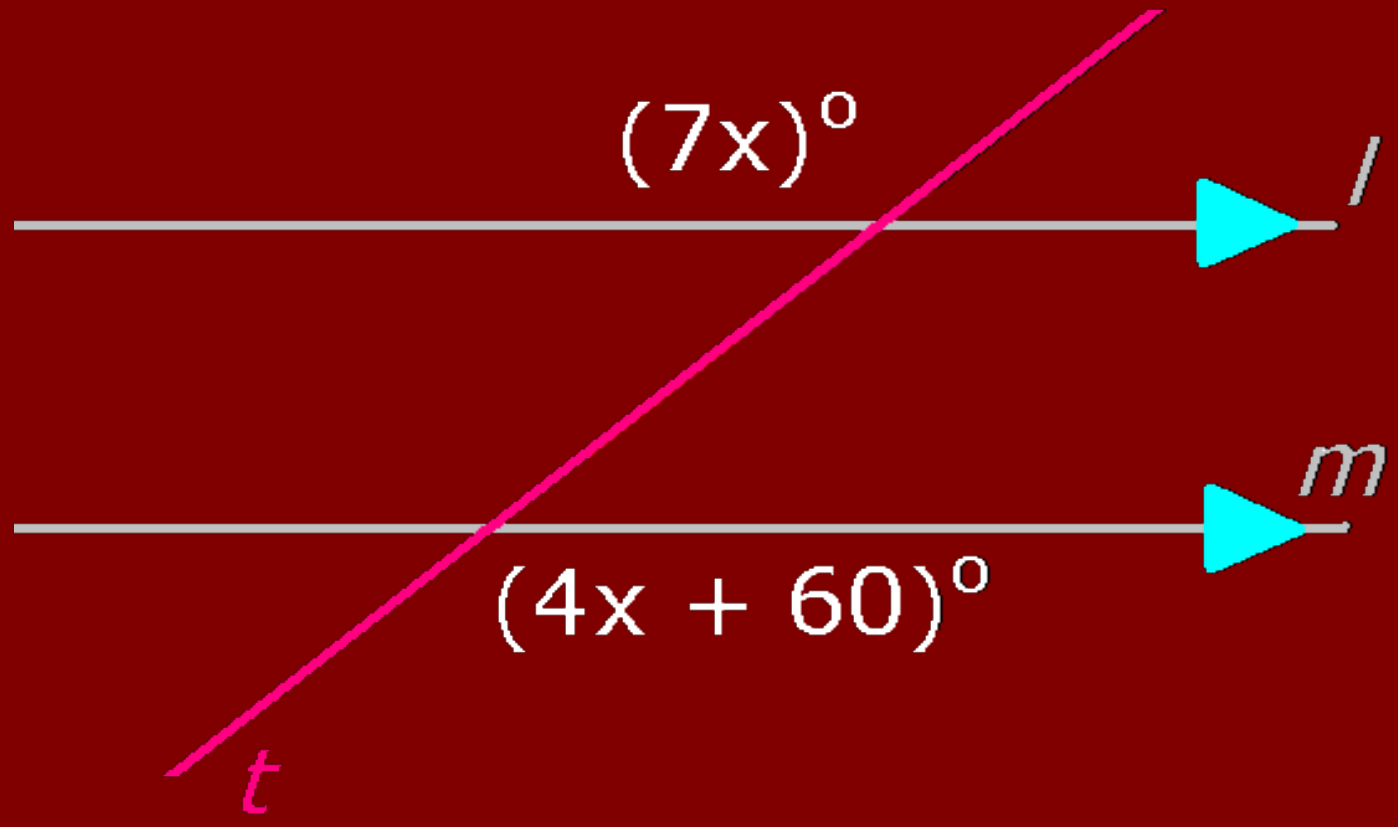
If $l \parallel m$

$\angle 1 \cong \angle 8$ & $\angle 2 \cong \angle 7$



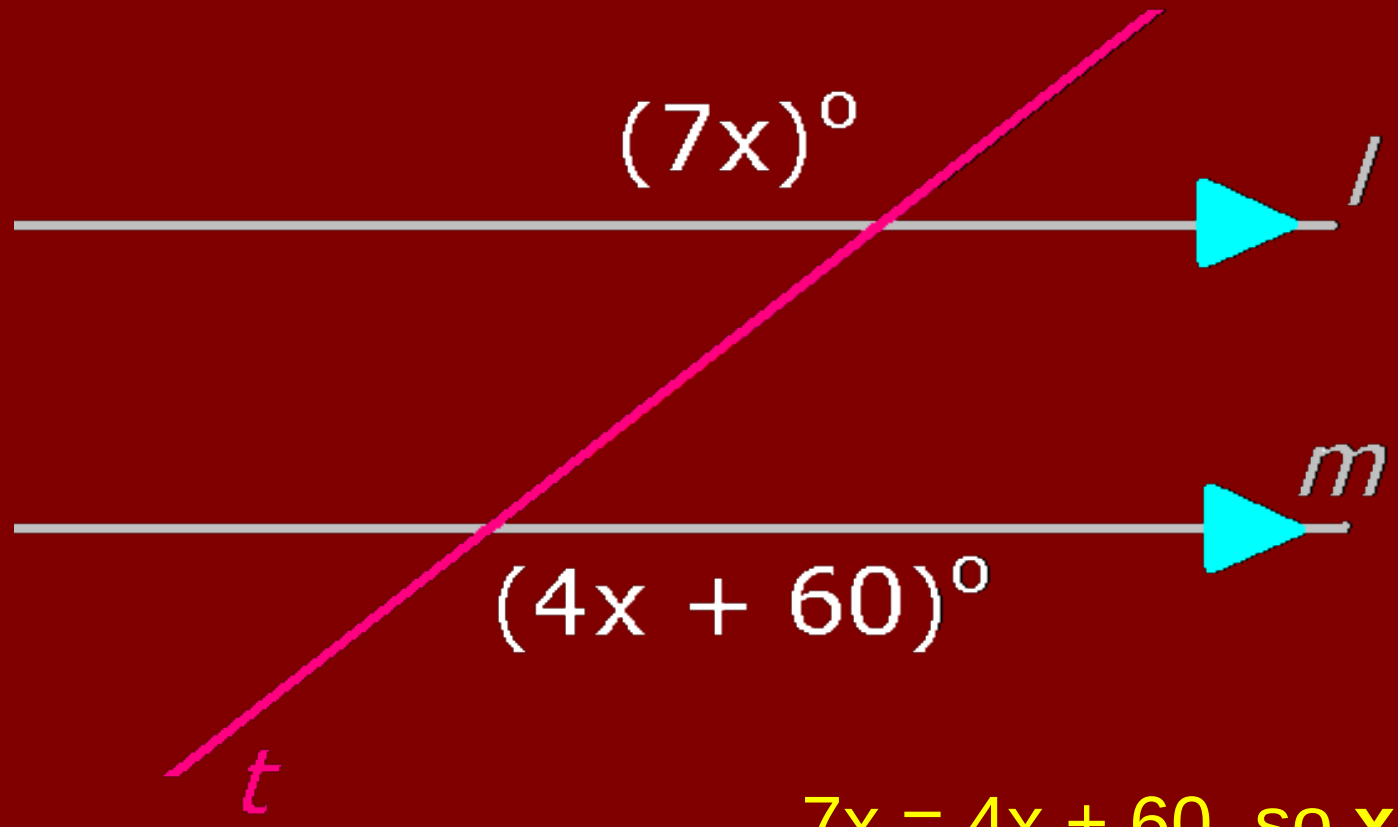
If $\parallel$ lines, then alt ext $\angle$ s $\cong$

Solve for *x*.



If $\parallel$ lines, then alt ext $\angle$ s $\cong$

Solve for *x*.



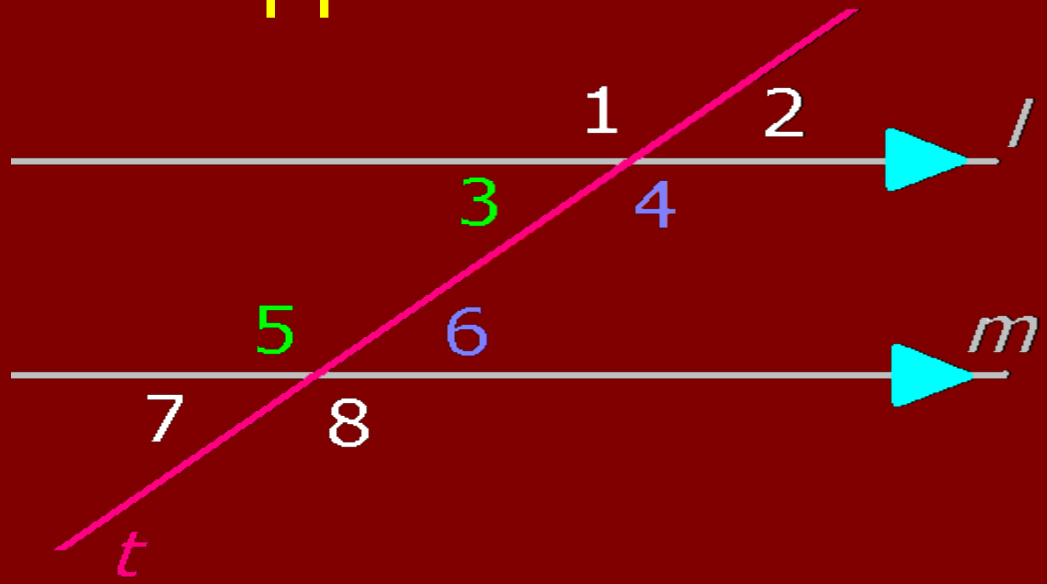
7x = 4x + 60, so **x = 20**

If $\parallel$ lines, then s-s int $\angle$s are supps

If $l \parallel m$

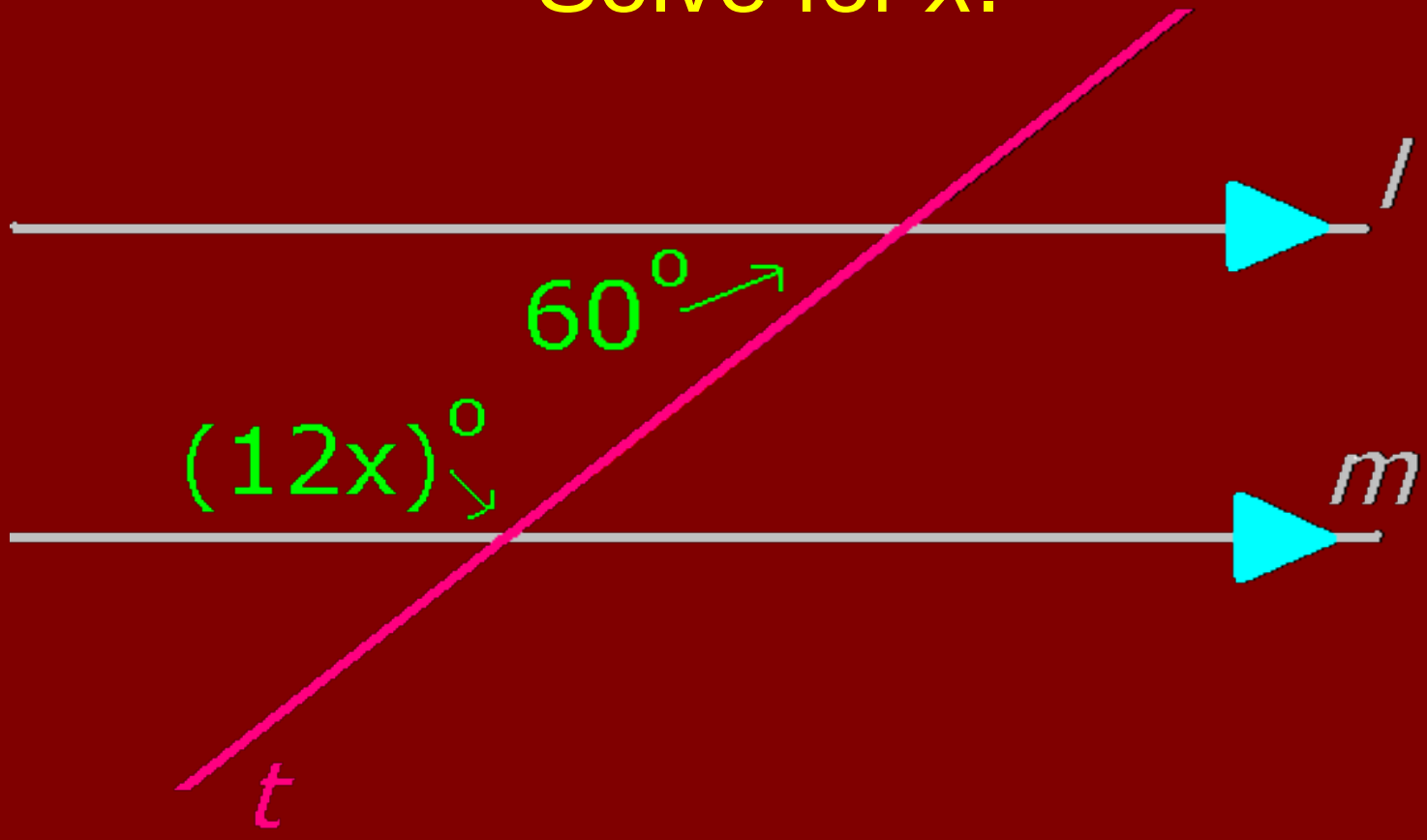
$\angle 3$ & $\angle 5$ are supps

and $\angle 4$ & $\angle 6$ are supps



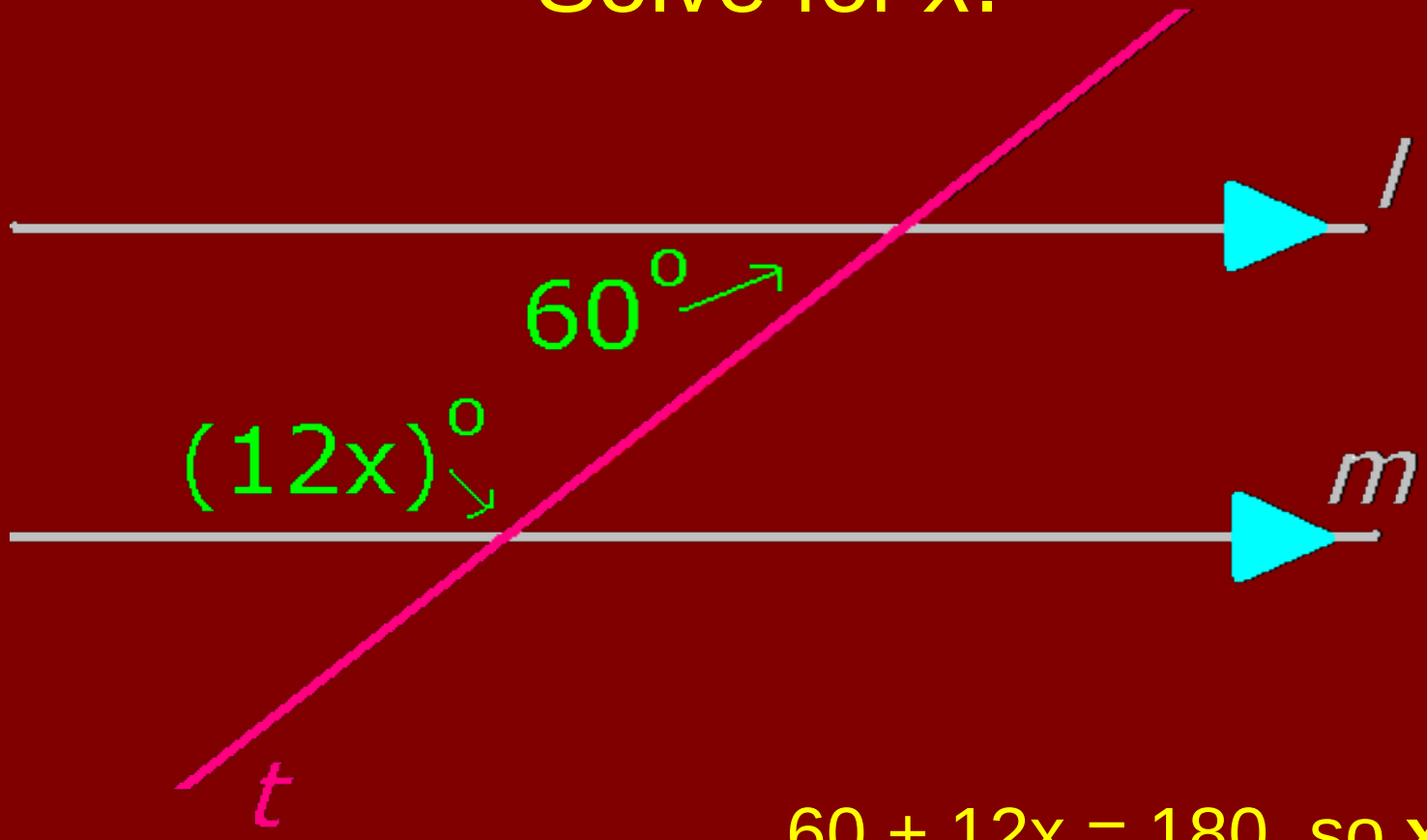
If || lines, then s-s int ∠s are supps

Solve for *x*.



If $\parallel$ lines, then s-s int $\angle$s are supps

Solve for *x*.



60 + 12x = 180, so **<u>x = 10</u>**

If you know **one** angle…

When two parallel lines are cut by a transversal, if you know the measure of **one** angle…

If you know **one** angle…

When two parallel lines are cut by a transversal, if you know the measure of **one** angle…

You know the measures of

ALL 8 ANGLES!!!

If you know **one** angle…

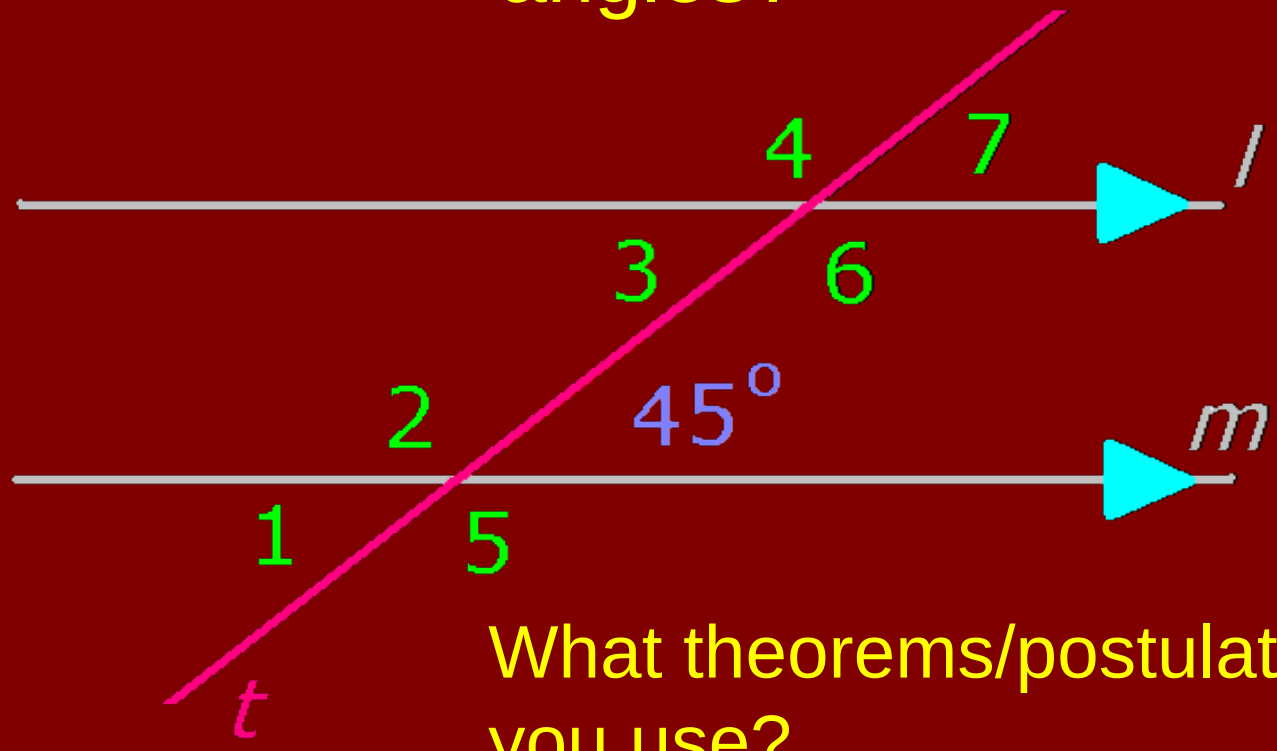
One angle has a measure of 45° .

What are the measures of the other seven angles?

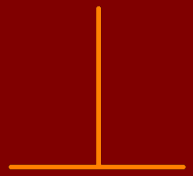
If you know **one** angle…

One angle has a measure of 45° .

What are the measures of the other seven angles?



What theorems/postulates did you use?



Transversal Theorem

In words, here is the

Perpendicular Transversal Theorem:

In a plane → 2 lines are perpendicular to the same transversal IF AND ONLY IF the 2 lines are parallel to each other

Transversal Theorem

In a plane

$l \perp t$ & $m \perp t$

$\Leftrightarrow$

$l \parallel m$