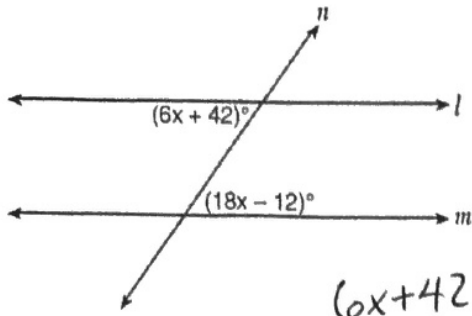


- 7 Line n intersects lines l and m , forming the angles shown in the diagram below.



Which value of x would prove $l \parallel m$?

- 1) 2.5
2) 4.5
3) 6.25
4) 8.75

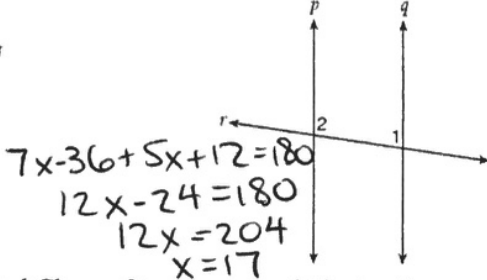
$$6x + 42 = 18x - 12$$

$$54 = 12x$$

$$4.5 = x$$

- 8 Lines p and q are intersected by line r , as shown below. If $m\angle 1 = 7x - 36$ and $m\angle 2 = 5x + 12$, for which value of x would $p \parallel q$?

- 1) 17
2) 24
3) 83
4) 97



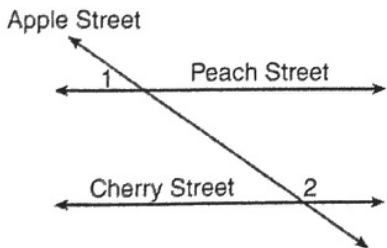
$$7x - 36 + 5x + 12 = 180$$

$$12x - 24 = 180$$

$$12x = 204$$

$$x = 17$$

- 9 Peach Street and Cherry Street are parallel. Apple Street intersects them, as shown in the diagram below. If $m\angle 1 = 2x + 36$ and $m\angle 2 = 7x - 9$, what is $m\angle 1$?



$$2x + 36 + 7x - 9 = 180$$

$$9x + 27 = 180$$

$$9x = 153$$

$$x = 17$$

$$m\angle 1 = 70$$

11. Determine the measures of all numbered angles

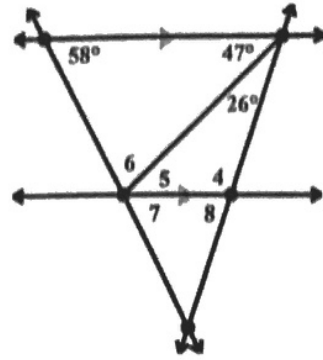
$$m\angle 4 = 107^\circ$$

$$m\angle 5 = 47^\circ$$

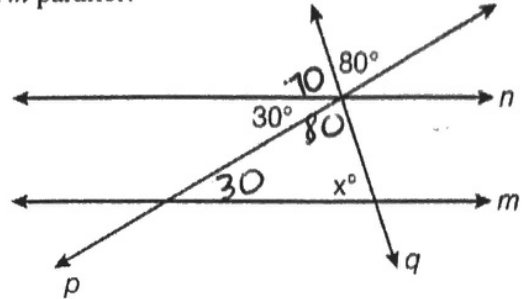
$$m\angle 6 = 75^\circ$$

$$m\angle 7 = 58^\circ$$

$$m\angle 8 = 73^\circ$$

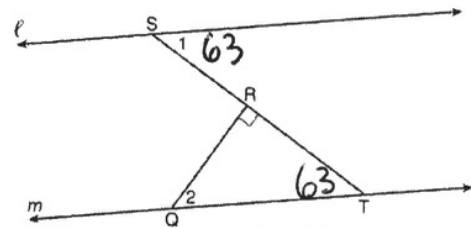


- 12 In the diagram below, lines n and m are cut by transversals p and q . What value of x would make lines n and m parallel?



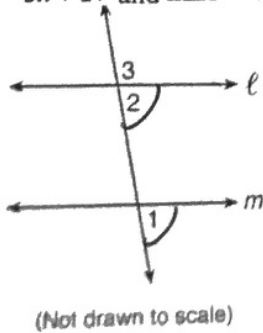
- 1) 110
2) 80
3) 70
4) 50

- 13 In the diagram below, $l \parallel m$ and $\overline{QR} \perp \overline{ST}$ at R .



If $m\angle 1 = 63$, find $m\angle 2$. = 27

- 10 In the diagram below, line l is parallel to line m , and line w is a transversal. If $m\angle 2 = 3x + 17$ and $m\angle 3 = 5x - 21$, what is $m\angle 1$?



(Not drawn to scale)

$$3x + 17 + 5x - 21 = 180$$

$$8x - 4 = 180$$

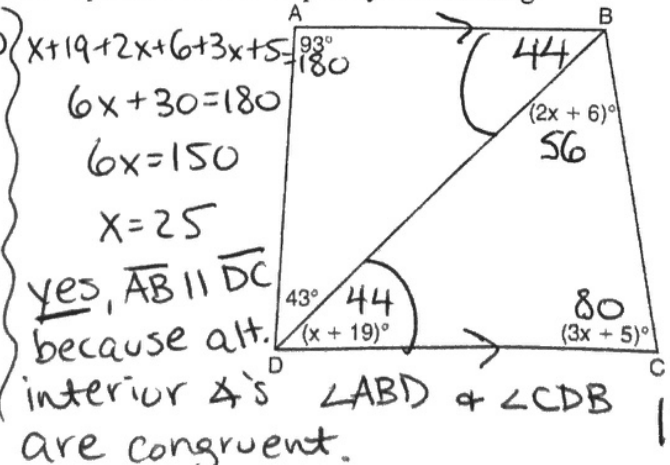
$$8x = 184$$

$$x = 23$$

$$m\angle 2 = 3(23) + 17$$

$$m\angle 1 = 86$$

- 14 In the diagram below of quadrilateral $ABCD$ with diagonal \overline{BD} , $m\angle A = 93$, $m\angle ADB = 43$, $m\angle C = 3x + 5$, $m\angle BDC = x + 19$, and $m\angle DBC = 2x + 6$. Determine if \overline{AB} is parallel to \overline{DC} . Explain your reasoning.



$$x + 19 + 2x + 6 + 3x + 5 = 180$$

$$6x + 30 = 180$$

$$6x = 150$$

$$x = 25$$

yes, $\overline{AB} \parallel \overline{DC}$ because alt. interior \angle 's $\angle ABD$ & $\angle CDB$ are congruent.