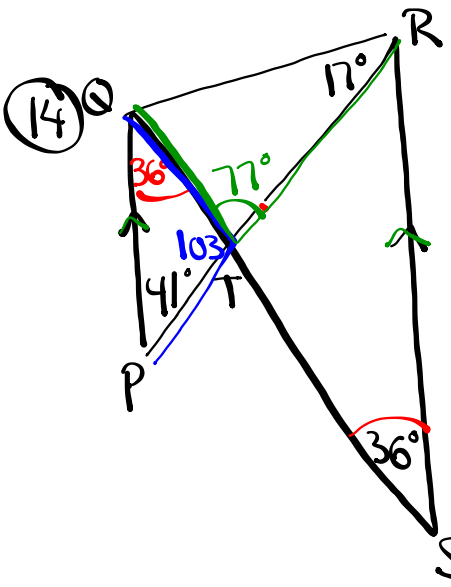
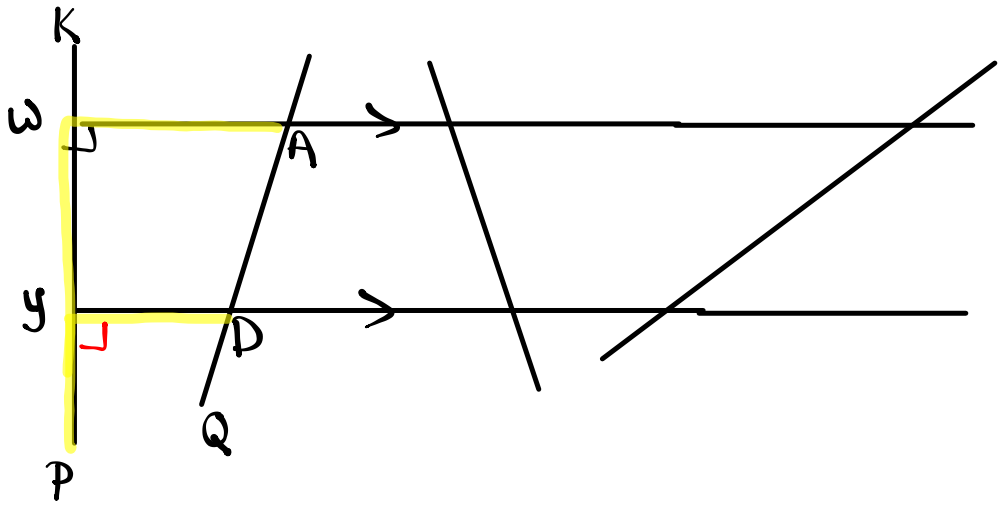


Find $\angle RTQ = 180° - 103°$

$= 77°$

$\angle QTP = 180° - 41° - 36°$

$= 103°$

② 

a) corresponding

(11) $A = \frac{180°(n-2)}{n}$

$162 = \frac{180(n-2)}{n}$

$\frac{162}{1} = \frac{180n - 360}{n}$

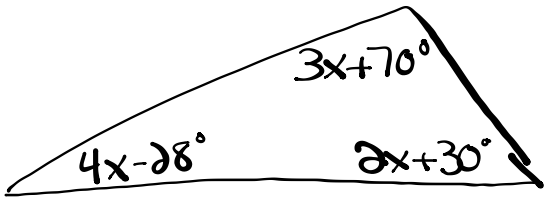
$162n = 180n - 360$

$162n - 180n = -360$

$\frac{-18n}{-18} = \frac{-360°}{-18}$

$n = 20$

16



$4x-28+3x+70^\circ+2x+30^\circ=180^\circ$

$9x+72=180$

$9x=180-72$

$\frac{9x}{9}=\frac{108}{9}$

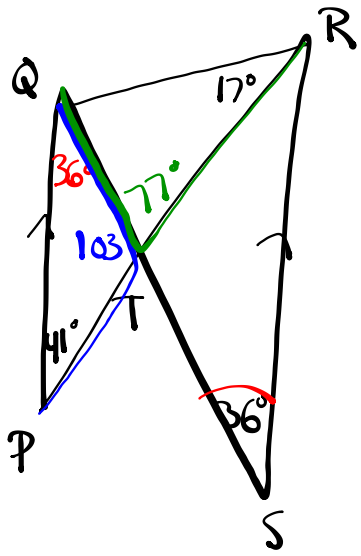
$x=12$

⑨ $n = 11$

$S = 180°(n-2)$

$S = 180°(11-2)$

$S = 180°(9)$

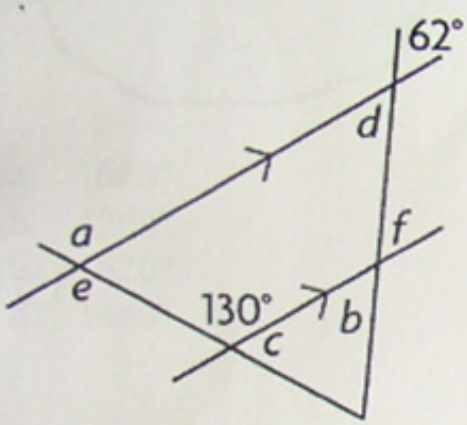


Find $\angle RTQ = 77°$

Multiple Choice

Identify the choice that best completes the statement or answers the question.

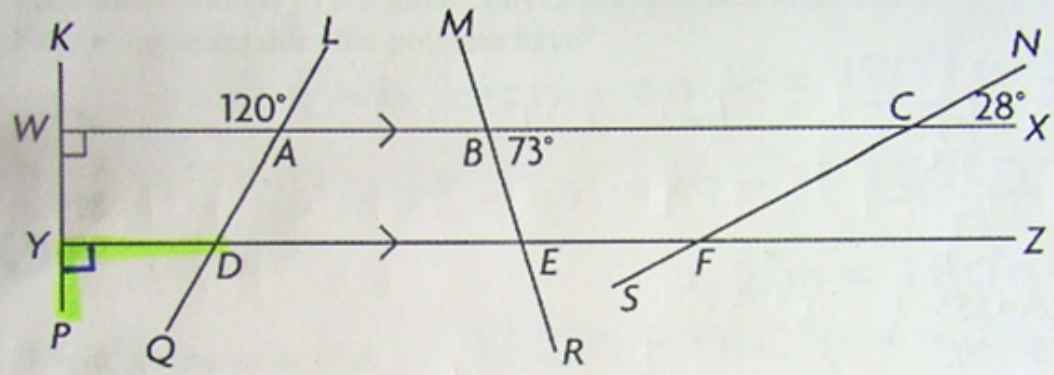
b 1. Which statement about the angles in this diagram is false?



a. $\angle a = \angle e$ ✓ (Vertically Opposite)
b. $\angle c = \angle e$ ✗ (FALSE)
c. $\angle d = \angle b$ ✓ (Corresponding)
d. $\angle b = \angle f$ ✓ (Vertically Opposite)

Q

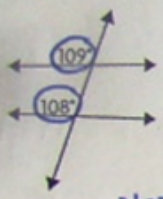
2. Which angle property proves $\angle PYD = 90°$?



a. corresponding angles ✓
b. alternate interior angles ×
c. alternate exterior angles ×
d. supplementary angles ×

C 3. In which diagrams are two lines parallel?

1.

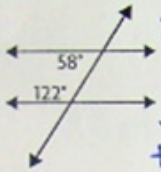


Corresponding Angles not equal

↓

NOT PARALLEL

2.

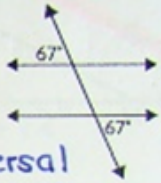


Interior Angles on the same side of the transversal are supplementary

↓

PARALLEL

3.



Alternate Exterior angles are equal.

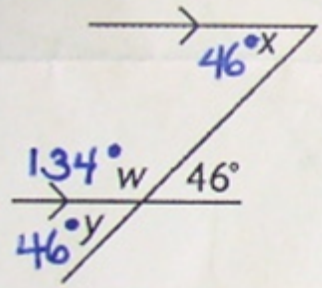
↓

PARALLEL

a. Choices 1, 2, and 3
b. Choice 1 and Choice 3
c. Choice 2 and Choice 3
d. Choice 1 only

b

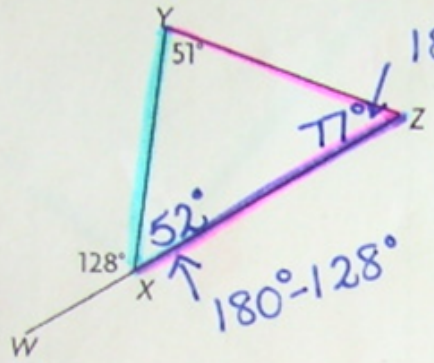
4. Which are the correct measures of the indicated angles?



a. $\angle w = 146°, \angle x = 44°, \angle y = 146°$
b. $\angle w = 134°, \angle x = 46°, \angle y = 46°$
c. $\angle w = 136, \angle x = 44°, \angle y = 136°$
d. $\angle w = 116°, \angle x = 64°, \angle y = 64°$

a

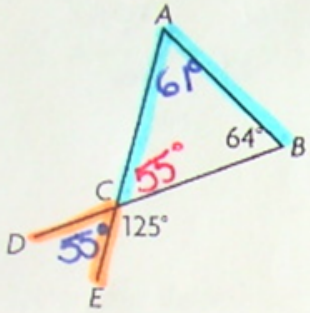
5. Which are the correct measures for $\angle YXZ$ and $\angle XZY$?



(a.) $\angle YXZ = 52°, \angle XZY = 77°$
b. $\angle YXZ = 52°, \angle XZY = 87°$
c. $\angle YXZ = 62°, \angle XZY = 77°$
d. $\angle YXZ = 62°, \angle XZY = 87°$

d

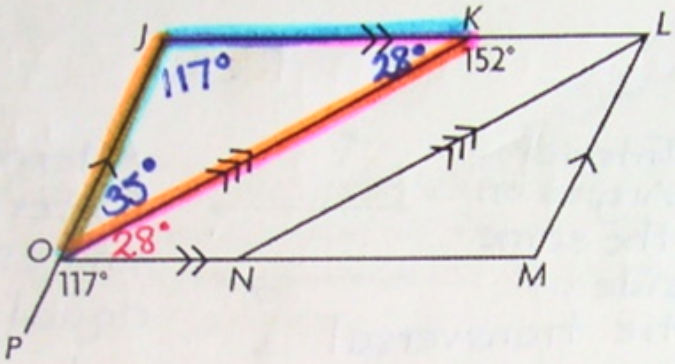
6. Which are the correct measures for $\angle DCE$ and $\angle CAB$?



a. $\angle DCE = 75°, \angle CAB = 55°$
b. $\angle DCE = 65°, \angle CAB = 50°$
c. $\angle DCE = 75°, \angle CAB = 66°$
(d.) $\angle DCE = 55°, \angle CAB = 61°$

C

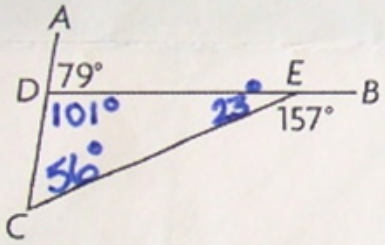
7. Which are the correct measures for $\angle OJK$, $\angle JKO$, and $\angle JOK$?



a. $\angle OJK = 102°$, $\angle JKO = 28°$, and $\angle JOK = 50°$
b. $\angle OJK = 152°$, $\angle JKO = 18°$, and $\angle JOK = 10°$
(c.) $\angle OJK = 117°$, $\angle JKO = 28°$, and $\angle JOK = 35°$
d. $\angle OJK = 117°$, $\angle JKO = 36°$, and $\angle JOK = 37°$

d

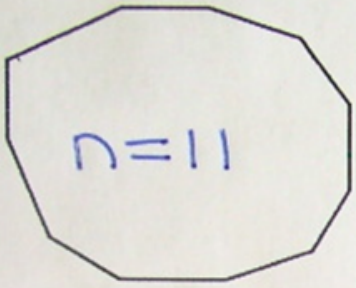
8. Which are the correct measures of the interior angles of ΔCDE?



a. $\angle DCE = 46°$, $\angle CDE = 101°$, and $\angle CED = 33°$
b. $\angle DCE = 32°$, $\angle CDE = 83°$, and $\angle CED = 65°$
c. $\angle DCE = 76°$, $\angle CDE = 91°$, and $\angle CED = 13°$
(d.) $\angle DCE = 56°$, $\angle CDE = 101°$, and $\angle CED = 23°$

C

9. Determine the sum of the measures of the interior angles of this polygon.



$S = 180(n-2)$
$S = 180(11-2)$
$S = 180(9)$
$S = 1620°$

a. 1080°
b. 1260°
c. 1620°
d. 1440°

b 10. Determine the sum of the measures of the angles in a 16-sided convex polygon.

a. 2700°
b. 2520°
c. 2340°
d. 2880°

$S = 180(n-2)$
$S = 180(16-2)$
$S = 180(14)$
$S = 2520°$

d 11. Each interior angle of a regular convex polygon measures 162°. How many sides does the polygon have?

a. 16
b. 19
c. 18
d. 20

Each interior angle $= \frac{180°(n-2)}{n}$

$162° = \frac{180°(n-2)}{n}$

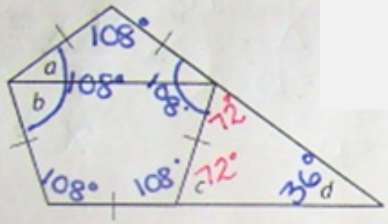
$162°n = 180°n - 360°$

$162°n - 180°n = -360°$

$\frac{-18°n}{-18°} = \frac{-360°}{-18°}$

$n = 20$

b 12. Determine the value of d.



a. 48°
b. 36°
c. 52°
d. 42°

① Each interior angle $= \frac{180°(n-2)}{n}$

$= \frac{180°(5-2)}{5}$

$= \frac{180°(3)}{5}$

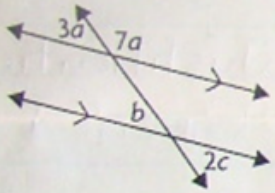
$= 108°$

② $d = 180° - 72° - 72°$

$d = 36°$

Short Answer

13. Determine the values of a, b, and c.



Supplementary

$3a + 7a = 180°$

$\frac{10a}{10} = \frac{180°}{10}$

$a = 18°$

Corresponding

$3a = b$

$3(18°) = b$

$54° = b$

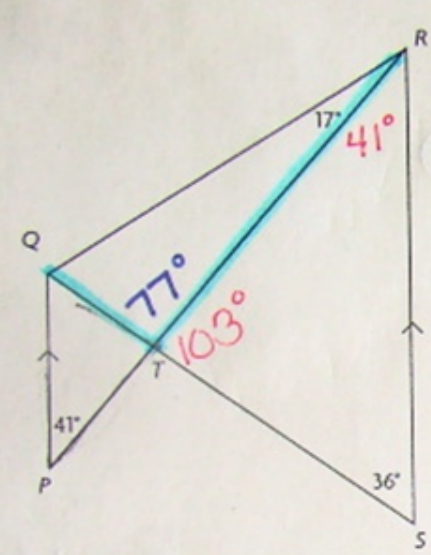
Vertically Opposite

$b = 2c$

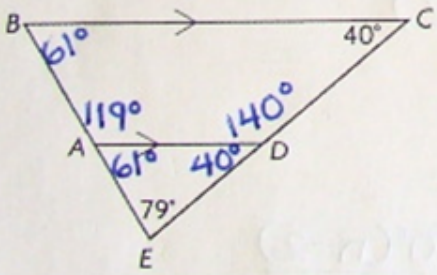
$\frac{54°}{2} = \frac{2c}{2}$

$27° = c$

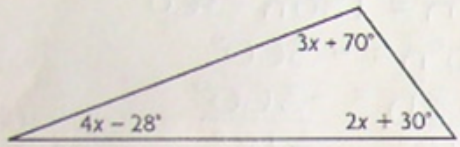
14. Determine the meas[illegible] of $\angle RTQ$.



15. Determine the unknown angles.



16. Determine the value of x.



$3x+70°+2x+30°+4x-28°=180°$

$9x+72°=180°$

$9x=180°-72°$

$\frac{9x}{9}=\frac{108°}{9}$

$x=12°$

$360°$

17. Gareth is measuring the exterior angles of a convex hexagon. So far, he has measured 60°, 60°, 60°, 30°, and 30°. What is the measure of the last exterior angle? Show your calculation.

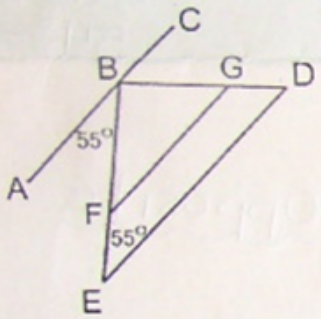
Last exterior angle

$\hookrightarrow 360°-60°-60°-60°-30°-30°$

$=120°$

18. **PROOF**

Prove: $AC \parallel ED$



Statement	Justification
$\angle ABF = 55°$	Given
$\angle FED = 55°$	Given
$AC \parallel ED$	Equal Alternate Interior Angles