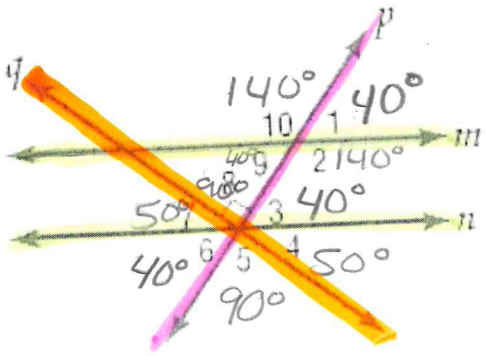
34

In the figure, line m is parallel to line n, and line q is perpendicular to line p. The measure of $\angle 1$ is 40°. What is the measure of $\angle 7$? Justify



$\angle 7 + \angle 8 + \angle 3 = 180$

$\angle 7 + 90 + 40 = 180$

$\angle 7 + 130 = 180$

$-130 \quad -130$

$\angle 7 = 50$

$\angle 7$ is 50°

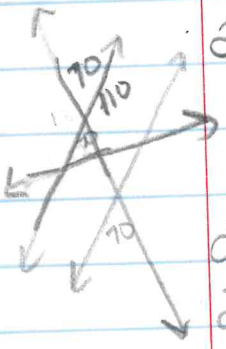
Because $\angle 1 + \angle 3$ are corresponding and $\angle 7 + \angle 8 \angle 3 = 180$ are supplementary

* Students who struggle seeing the relationships can highlight

Pg 412 7.2B

19, 21, 22, 23, 27, 29 CT 32, CT 36, 38, 39

19. $m\angle 2 = 120°$ because $\angle 2 + \angle 1$ are alternate ext. angles
$m\angle 3 = 60°$ because $\angle 3 + \angle 2$ are supplementary



21. $m\angle 7 = 70°$ $\angle 2 + \angle 6$ are congruent $= 110$ and OR
$\angle 6 + \angle 7$ are supplementary

22. $m\angle 2 + \angle 6$ are corresponding $\angle 6 = 110°$

23. $\angle 2 + \angle 8$ are alternet interior angles $\angle 8 = 110$
OR $\angle 6 \angle 8$ are vertical angles

27. $\angle 1 + \angle 2$ are alternate interior angles $m\angle 2 = 22$

29a) $\angle 1 = \angle 2$

$45 = x + 25$

$-25 \quad -25$

$20 = x$

29b) $\frac{2x}{2} = \frac{80}{2}$

$x = 40$

32. $2x + x = 180$

$\frac{3x}{3} = \frac{180}{3}$

$x = 60$

Describe the method
Since angles are supplementary I would add them together and set them equal to 180° then solve

36. The are supplementary

38. F 40°

39. A