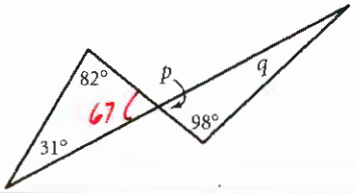
Name Answers Date

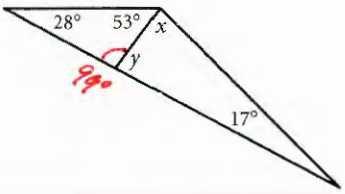
4.1 – Triangle Sums

Determine the missing variables.

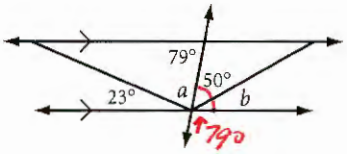
1) $p =$ 67°, $q =$ 15°



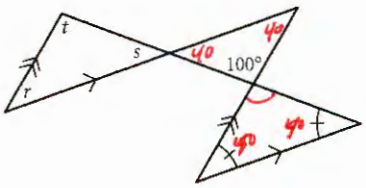
2) $x =$ 82°, $y =$ 81°



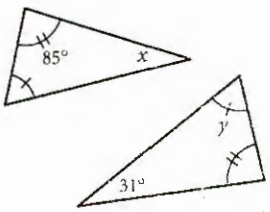
3) $a =$ 78°, $b =$ 29°



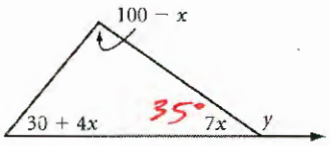
4) $t =$ 100°



5) $x =$ 31°, $y =$ 64°



6) $x =$ 5°, $y =$ 145°



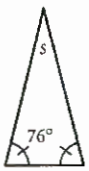
$7x + (30+4x) + (100-x) = 180$

$10x + 130 = 180$

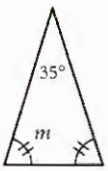
$10x = 50$

$x = 5$

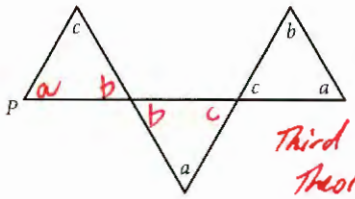
7) $s =$ 28°



8) $m =$ 72.5°

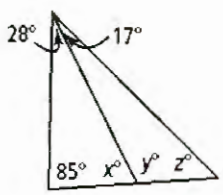


9) $m\angle P =$ a



Third Angle Theorem!

10)

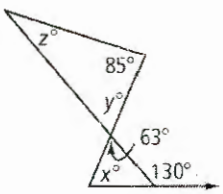


$x = 67°$

$y = 113°$

$z = 50°$

11)

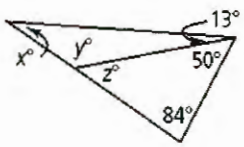


$x = 67°$

$y = 65°$

$z = 32°$

12)

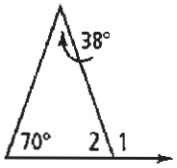


$x = 33°$

$y = 134°$

$z = 46°$

13) Use the diagram at the right to answer the questions.



a. Which angle is an exterior angle? ∠1

b. What are its remote interior angles? 70° and 38°

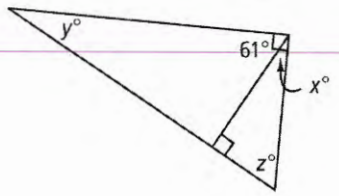
c. Find $m\angle 1$ and $m\angle 2$.

$m\angle 1 = 108°$

$m\angle 2 = 72°$

Find the values of the variables and the measures of the angles.

14)

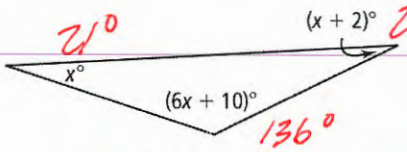


$x = 29°$

$y = 29°$

$z = 61°$

15)



$y° = 23°$

$136°$

$x + (6x+10) + x+2 = 180°$

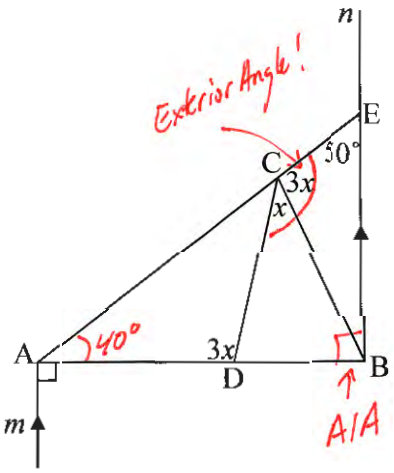
$8x + 12 = 180$

$8x = 168$

$x = 21$

Find the value of x. SHOW ALL ALGEBRAIC WORK.

16) In the diagram, $m \parallel n$, $\overline{AB} \perp m$, $m\angle ADC = m\angle BCE = 3x$, $\angle CEB = 50°$, and $\angle BCD = x$.



Exterior Angle!

AIA

$40 + 3x = x + 3x$

$40° = x$