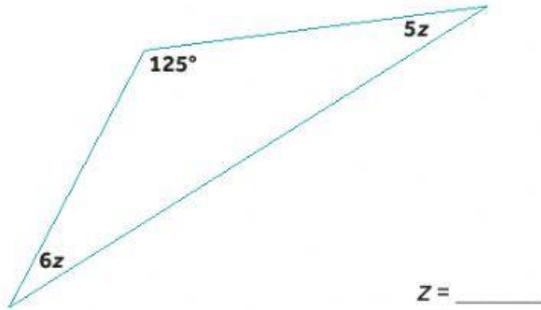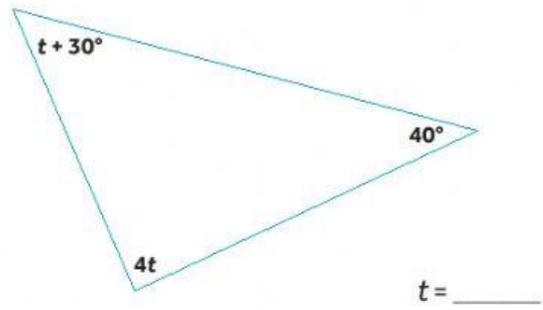Name _____   Date _____

Interior Angles in Triangles:
Solve for the Variable

The **Triangle Angle-Sum Theorem** states that the measures of the interior angles of a triangle add up to 180°. Use this theorem to solve for the variables below. Show workout for each problem & submit when complete.
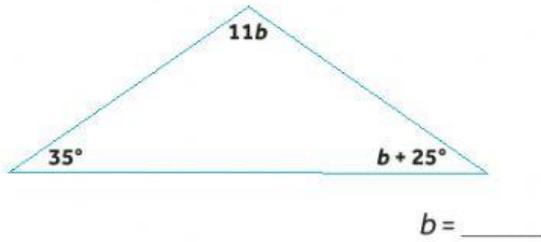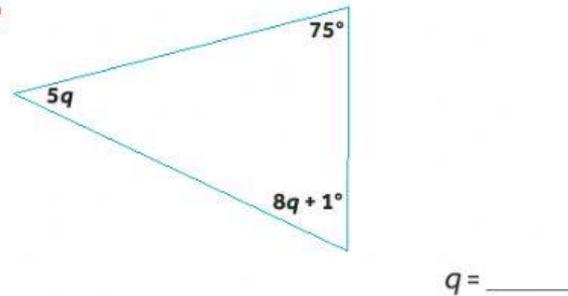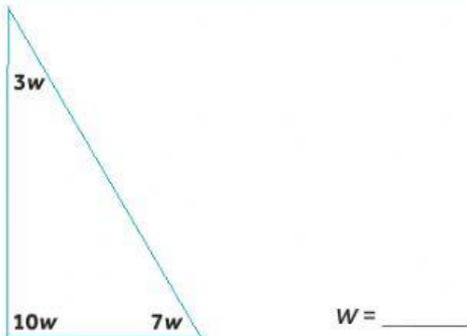
1.

$125°$ $5z$ $6z$

$z =$ _____

2.

$t + 30°$ $40°$ $4t$

$t =$ _____

3.

$11b$ $35°$ $b + 25°$

$b =$ _____

4.

$75°$ $5q$ $8q + 1°$

$q =$ _____

5.

$3w$ $10w$ $7w$

$w =$ _____

6.

$8r + 2°$ $40°$ $16r - 6°$

$r =$ _____

7.

$86°$ $9c + 2°$ $12c - 13°$

$c =$ _____

8.

$3n$ $n + 40°$ $4n - 20°$

$n =$ _____

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Name _____   Date _____
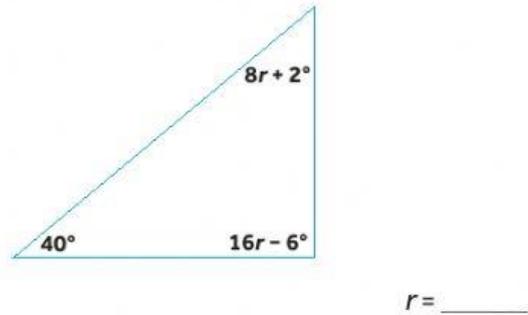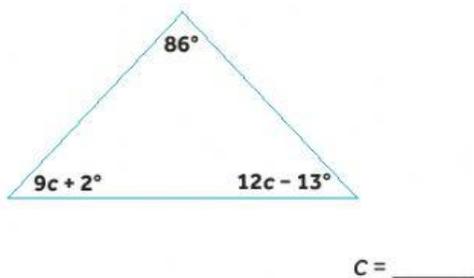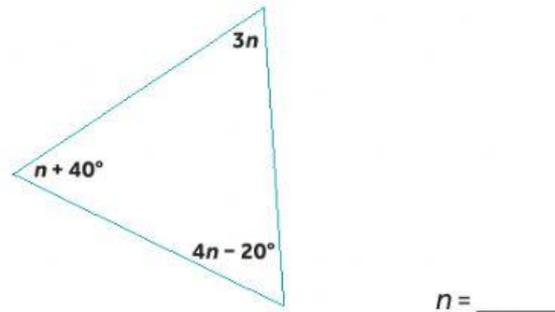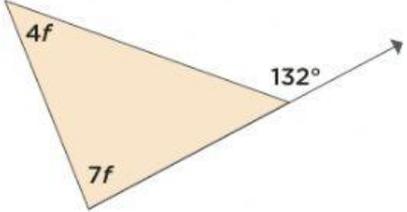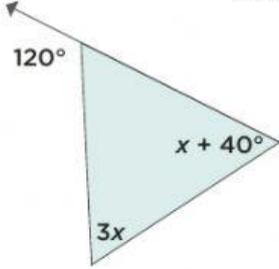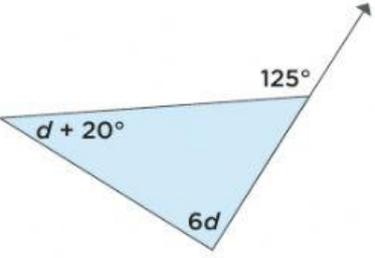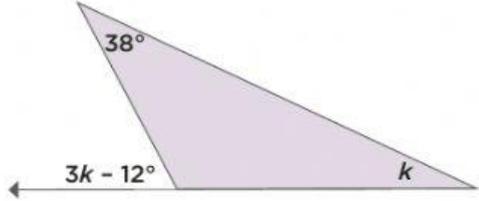
EXTERIOR ANGLES OF TRIANGLES:
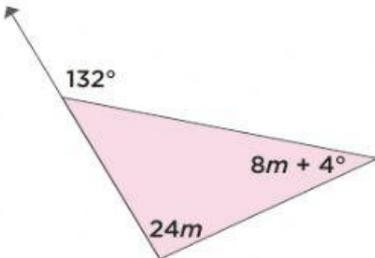# SOLVE FOR THE VARIABLE

The **Exterior Angle Theorem** states that the measure of an exterior angle of a triangle is equal to the sum of the two opposite interior angles. Use this theorem to solve for the variables below. Show workout for each problem & submit when complete.
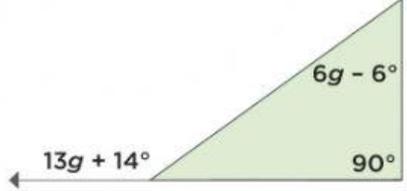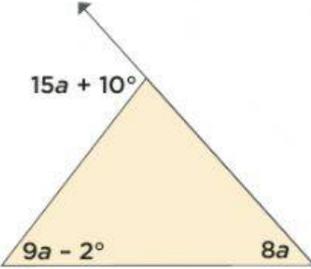
1.

$4f$

$132°$

$7f$

$f =$ _____

2.

$120°$

$x + 40°$

$3x$

$x =$ _____

3.

$125°$

$d + 20°$

$6d$

$d =$ _____

4.

$38°$

$3k - 12°$

k

$k =$ _____

5.

$132°$

$8m + 4°$

$24m$

$m =$ _____

6.

$6g - 6°$

$13g + 14°$ $90°$

$g =$ _____

7.

$15a + 10°$

$9a - 2°$ $8a$

$a =$ _____

8.

$35t - 3°$ $50t + 62°$

$45t + 5°$

$t =$ _____

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