## BLUE Ch.3 Review

SLE: 3a) A life-long learner who: meets or exceeds standards

*L.O. I will review Ch.3 skills.*

Vertical angles 

Corresponding angles 

Alternate Interior 

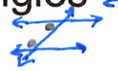
Alternate Exterior 

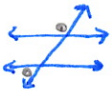
equation: ___ = ___

Complementary angles 

equation: ___ + ___ = 90°

Supplementary angles 

Collinear Interior 

Collinear Exterior 

equation: ___ + ___ = 180°

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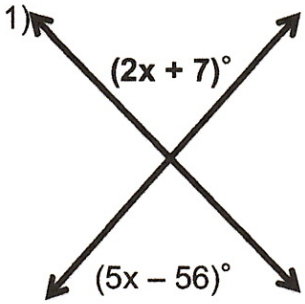
1)




X = 21°

$2x+7 = 5x-56$

$-2x \quad -2x$

$7 = 3x-56$

$+56 \quad +56$

$63 = 3x$

$\div 3 \quad \div 3$

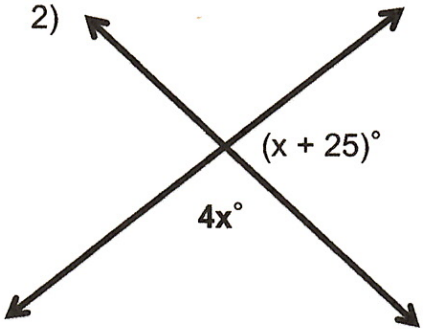
$21 = x$

$2x+7$

$2(21)+7$

$\boxed{49°}$

2)




X = 31°

$x+25+4x = 180$

$5x+25 = 180$

$-25 \quad -25$

$5x = 155$

$\div 5 \quad \div 5$

$x = 31°$

$4x$

$4(31)$

$\boxed{124°}$

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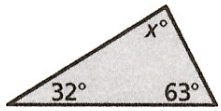
## Find the measure of the interior angle




$x + 32 + 63 = 180$

$x + 95 = 180$

$-95 \quad -95$

$x = 85$

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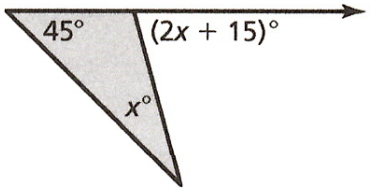
## Find the measure of the exterior angle




$x + 45 = 2x + 15$

$-x \quad -x$

$45 = x + 15$

$-15 \quad -15$

$30 = x$

$2x + 15$

$2(30) + 15$

$60 + 15$

$\boxed{75°}$

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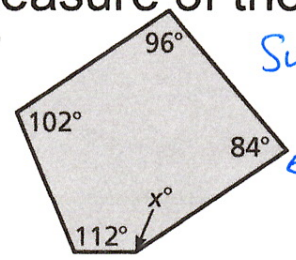
## Find the measure of the interior angle




Sum of interior angles:
$180(n-2)$ $n$ = # of sides

← 5 sides

$180(5-2)$
$540°$

$112 + 102 + 96 + 84 + x = 540$

$394 + x = 540$

$-394 \quad | -394$

$x = 146°$

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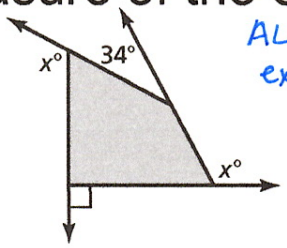
## Find the measure of the exterior angle




ALL Polygons:
exterior angle = 360°

$x + 90 + x + 34 = 360$

$2x + 124 = 360$

$-124 \quad | -124$

$2x = 236$

$\div 2 \quad | \div 2$

$x = 118°$

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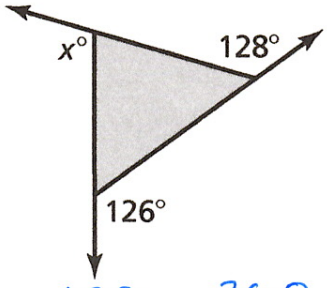
## Find the measure of the exterior angle




360°

$x + 126 + 128 = 360$

$x + 254 = 360$

$-254 \quad -254$

$x = 106°$

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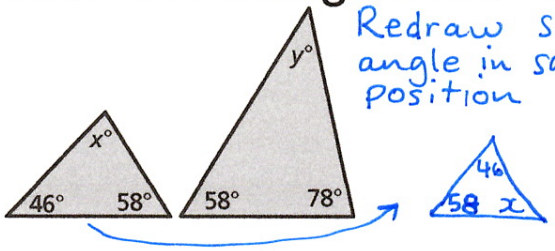
## Tell whether the triangles are similar.




Redraw so same angle in same position

To be similar: $x = 78°$ or $y = 46°$

$x + 46 + 58 = 180$

$x + 104 = 180$

$-104 \quad -104$

$x = 76$

$76 \neq 78$

so NOT similar

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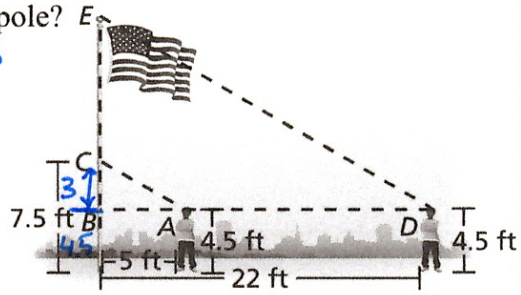
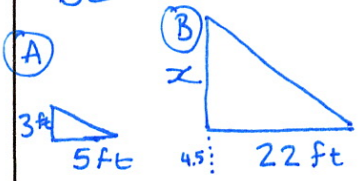
What is the height of the flag pole?




$\overline{BC} = 7.5 - 4.5 = 3$




$$\frac{\text{height A}}{\text{height B}} = \frac{\text{Length A}}{\text{Length B}}$$

$$\frac{3}{5} = \frac{x}{22} \qquad \frac{22 \times 3}{5} = 13.2 \text{ ft} + 4.5 \text{ ft}$$

17.7 ft

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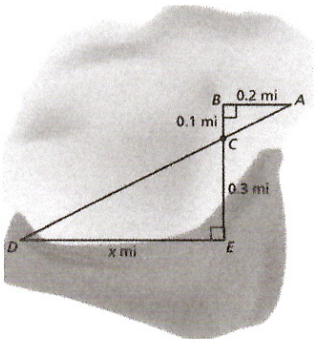
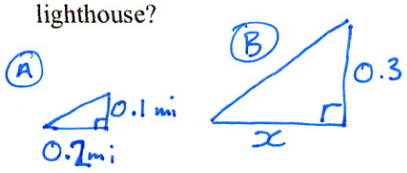
You are on a boat in the ocean, at Point *A*. You locate a lighthouse at Point *D*, beyond the line of sight of the marker at point *C*. You drive 0.2 mile west to Point *B* and then 0.1 mile south to Point *C*. You drive 0.3 mile more to arrive at Point *E*, which is due east of the lighthouse.

What is the distance from Point *E* to the lighthouse?




$$\frac{\text{Height A}}{\text{Height B}} = \frac{\text{Length A}}{\text{Length B}}$$

$$\frac{0.1}{0.3} = \frac{0.2}{x} \qquad \frac{0.2 \times 0.3}{0.1} = 0.6 \text{ mi}$$