Review Questions

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PG. 541

24. CCSS **Identify Structure** The John Hancock Center in Chicago is shown at the right. Classify each pair of angles.

a. $\angle 1$ and $\angle 2$ ADJACENT **b.** $\angle 2$ and $\angle 4$ VERTICAL

c. $\angle 3$ and $\angle 4$ ADJACENT **d.** $\angle 1$ and $\angle 3$ VERTICAL

e. If the measure of $\angle 2$ is 66°, what are the measures of the other angles? $\angle 4 = 66°$ (VERTICAL ANGLES ARE CONGRUENT)

$\angle 1 = 114°$ $\angle 3 = 114°$

$\angle 1 + \angle 2 = 180$

$\angle 1 + 66 = 180$ $180 - 66 = \angle 1$

PG. 549

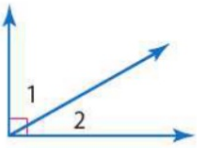
Identify each pair of angles as *complementary, supplementary,* or *neither*.

16.

Homework Help

∠1 and ∠2 form a straight angle. So, the angles are supplementary.

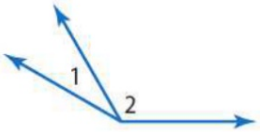
17.



COMPLEMENTARY

$\angle 1 + \angle 2 = 90°$

18.



NEITHER

$\neq 90$ & $\neq 180$

20. ∠C and ∠D are complementary. The measure of ∠C is $(4x)°$ and the measure of ∠D is 26°. What is the value of x?

$\angle C + \angle D = 90°$

$4x + 26 = 90°$

$-26 \quad -26$

$\frac{4x}{4} = \frac{64}{4}$

$x = 16$

PG. 561

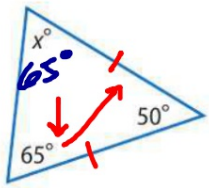
Find the value of *x*.

65 + 50 = 115

34 + 56 = 90

180 − 90 = 90

20.

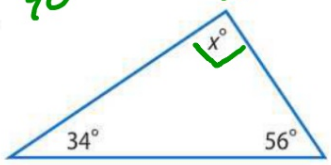


180 − 115 = 65

ACUTE

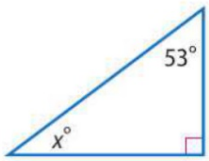
ISOCELESE

21.



RIGHT

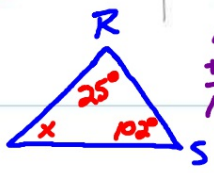
22.



?

180 − 127 = 53

23. Find $m\angle Q$ in $\triangle QRS$ if $m\angle R = 25°$ and $m\angle S = 102°$.

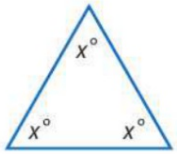


102 + 25 = 127

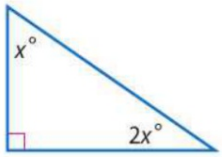
$\angle Q = 53°$

CCSS **Reason Abstractly** **Find the value of *x* in each triangle.**

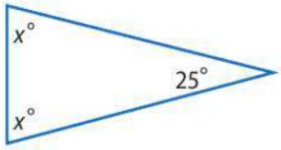
24.



25.

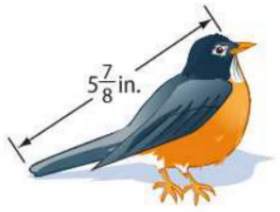


26.



PG. 581

14. Find the length of the model. Then find the scale factor. The length of an actual bird is shown at the right.



$\frac{\text{SCALE}}{\text{ACTUAL}} = \frac{1}{0.5} = \frac{2}{1}$ ← SCALE FACTOR

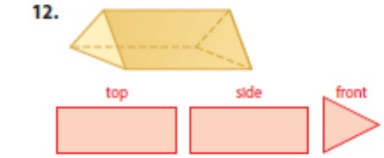
$\frac{1}{0.5} = \frac{x}{5\frac{7}{8}}$ (×2 on each side)

$5\frac{7}{8} \times 2 = 11\frac{3}{4}$

Extra Practice

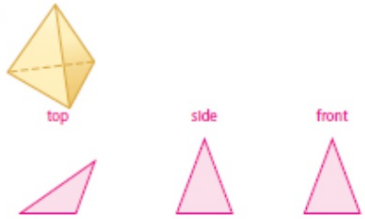
Draw a top, a side, and a front view of each figure.

12.



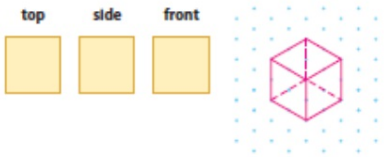
Homework Help

13.

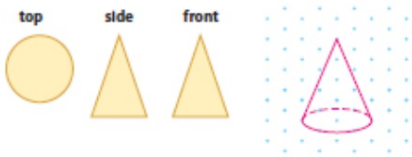


Draw a corner view of each three-dimensional figure whose top view, side view, and and front view are shown.

14.

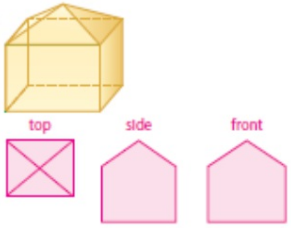


15.

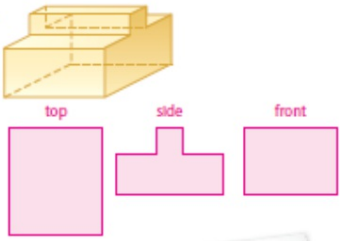


Draw a top, a side, and a front view of each figure.

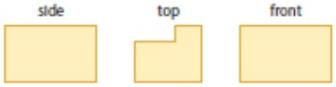
16.



17.



18. CCSS **Find the Error** Raul drew the side, top, and front view of the figure shown at the right. Find his mistake and correct it.



The top and side view should be switched.

15.

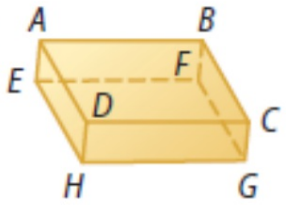


figure name: rectangular prism

bases: ABCD, EFGH, ABFE, DCGH, ADHE, BCGF

faces: ABCD, EFGH, ABFE, DCGH, ADHE, BCGF

edges: $\overline{AB}$, $\overline{BC}$, $\overline{CD}$, $\overline{AD}$, $\overline{EF}$, $\overline{FG}$, $\overline{GH}$, $\overline{EH}$, $\overline{AE}$, $\overline{BF}$, $\overline{CG}$, $\overline{DH}$

vertices: A, B, C, D, E, F, G, H

skew lines: Sample answers: $\overline{DH}$ and $\overline{GF}$

SKEW LINES
$\overline{DH}$ & $\overline{AB}$
$\overline{DH}$ & $\overline{EF}$
$\overline{DH}$ & $\overline{GF}$
$\overline{DH}$ & $\overline{BC}$