Module 3 Review

Complete all work on lined paper.

Define the following:

1. Proportion
2. Ratio
3. Scale
4. Vertical angles
5. Adjacent angles
6. Supplementary angles
7. Complementary angles

Solve the proportion.

8. $\frac{7}{x} = \frac{15}{2}$
9. $\frac{x}{8} = \frac{3}{2}$
10. $\frac{7}{9} = \frac{x}{5}$
11. $\frac{8}{3} = \frac{12}{x}$

Find the missing value.

A map has a scale of 1 inch = 4.5 miles

12. Find the distance between two cities if the distance on the map is 1.75 inches.
13. Find the distance on the map if the actual cities are 9.25 miles apart.

14. Two similar figures have corresponding sides that measure 4 inches and 7 inches. The smaller figure has a perimeter of 15. What is the perimeter of the larger figure?
15. Two similar figures have corresponding sides that measure 2 inches and 7 inches. What is the ratio of the Perimeters? The Areas?

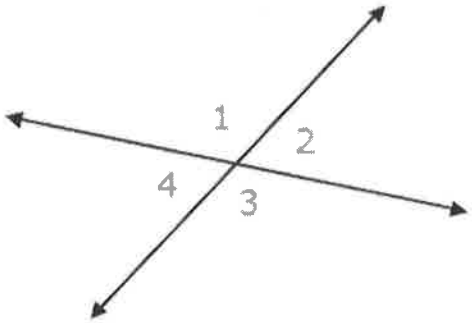
Determine if the following dimensions could form a triangle.

16. Sides 2 in, 3 in, 7 in
17. Sides 4 in, 8 in, 10 in

18. Determine if the following cross sections can be made from each of the shapes.

Shape	Circle	Square	rectangle	Triangle
Cube				
Triangular Prism				
Cylinder				
Sphere				
Rectangular prism				
Rectangular Pyramid				
Square Pyramid				

Use the graph to the right for questions 12-18.



If $m\angle 3 = 145°$, find:

19. $m\angle 1$
20. $m\angle 2$
21. $m\angle 4$

22. Which angles are vertical angles?
23. Which angles are adjacent angles?
24. Which angles are supplementary angles?

25. Using the same graph, if $m\angle 1 = 125°$ and $m\angle 3 = 25x$, find the value of x.

Review - Module 3

1. two ratios that are set equal
2. a comparison of two numbers
3. a ratio of two measurements
4. two angles formed by the same lines that share only a vertex vertical angles are equivalent.
5. two angles that share only a vertex and one side but do not overlap
6. two angles whose measurements add to 180°
7. two angles whose measurements have a sum of 90°

8. $\frac{7}{x} = \frac{15}{2}$

$7 \cdot 2 = 15x$

$\frac{14}{15} = \frac{15x}{15}$

$\frac{14}{15} = x$

9. $\frac{x}{8} = \frac{3}{2}$

$2x = 3 \cdot 8$

$2x = 24$

$x = 12$

10. $\frac{7}{9} = \frac{x}{5}$

$9x = 7 \cdot 5$

$\frac{9x}{9} = \frac{35}{9}$

$x = \frac{35}{9}$ or $3\frac{8}{9}$

11. $\frac{8}{3} = \frac{12}{x}$

$8x = 36$

$\frac{8x}{8} = \frac{36}{8}$

$x = \frac{9}{2}$ or $4\frac{1}{2}$

12. $\frac{1\text{ in}}{4.5\text{ mi}} = \frac{1.75}{x}$

$x = 7.875\text{ mi}$

13. $\frac{1\text{ in}}{4.5\text{ mi}} = \frac{x}{9.25}$

$\frac{4.5x}{4.5} = \frac{9.25}{4.5}$

2.06 in or $\frac{925}{450} = \frac{37}{18}$ in or $2\frac{1}{18}$ in.

14. $\frac{4}{15} = \frac{7}{x}$

$\frac{4x}{4} = \frac{105}{4}$

$x = \frac{105}{4}$ or $26\frac{1}{4}$

15. side: $\frac{4}{7}$

Perimeter: $\frac{4}{7}$

Area: $\frac{16}{49}$

$\frac{4.4}{7.7}$

16. $2+3=5$

NO $5 < 7$

17. $4+8=12$

$8+10=18$

$4+10=14$

yes

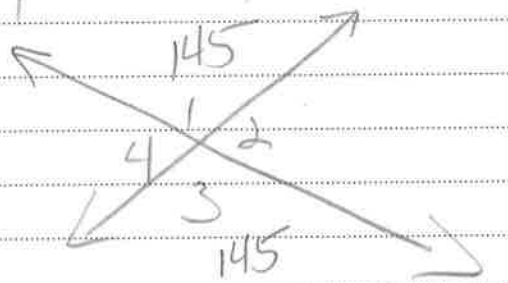
18.

	circle	Square	rectangle	triangle
Cube	NO	yes	yes	yes
triangular Prism	NO	no	no	yes
Cylinder	yes	no	yes	no
Sphere	yes	no	no	no
rect. prism	no	no	yes	yes
rect pyramid	no	no	no	yes
Square pyramid	no	yes	yes	yes

19. $m\angle 1 = 145°$

20. $m\angle 2 = 35°$

21. $m\angle 4 = 35°$



22. $\angle 1 \cong \angle 3$

$\angle 2 \cong \angle 4$

23. $\angle 1 \cong \angle 2$, $\angle 2 \cong \angle 3$, $\angle 3 \cong \angle 4$, $\angle 4 \cong \angle 1$

24. $\angle 1 \cong \angle 2$, $\angle 2 \cong \angle 3$, $\angle 3 \cong \angle 4$, $\angle 4 \cong \angle 1$

25. $\frac{125}{25} = \frac{25x}{25}$ $x = 5$