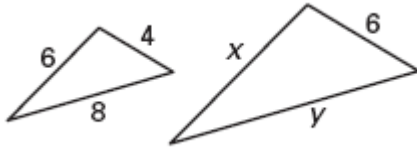


Name: _____

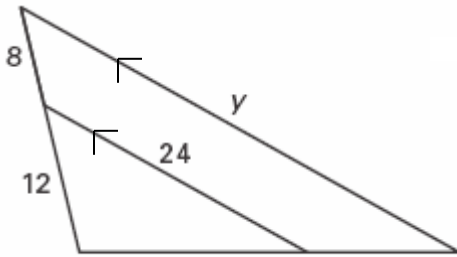
Hour: _____

GEOMETRY SEMESTER 2 FINAL REVIEW #2

1. The ratio of the side lengths of the small Δ to the big Δ is 2:3. Find x and y .

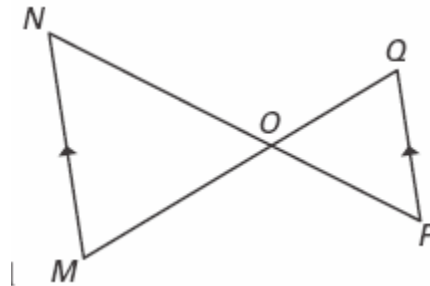


2. Find y .



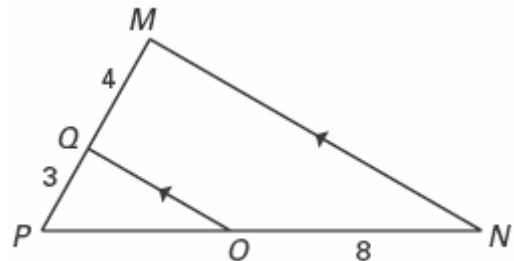
3. The triangles are similar. Which choice below is NOT a correct statement?

- (A) $\angle N \cong \angle Q$
- (B) $\Delta NOM \sim \Delta POQ$
- (C) $\frac{NM}{QP} = \frac{NO}{OP}$
- (D) $\frac{MO}{NO} = \frac{OQ}{OP}$
- (E) $\angle M \cong \angle Q$

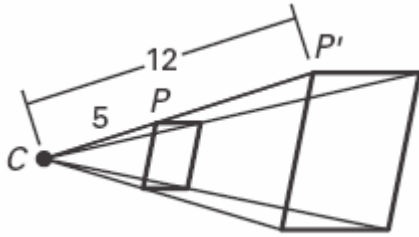


4. Which of the following statements is true?

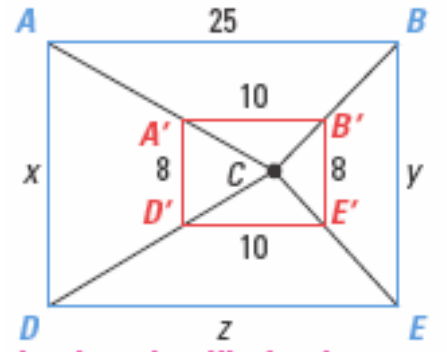
- (A) $\Delta PQO \sim \Delta PMN$ by SAS~
- (B) $\Delta PQO \sim \Delta PMN$ by AA~
- (C) $\Delta PQO \sim \Delta PMN$ by SSS~
- (D) $\Delta PQO \sim \Delta PNM$ by AA~



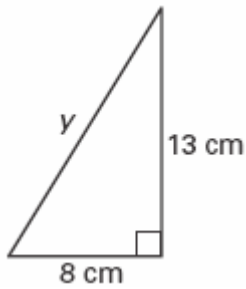
5. Identify the dilation and scale factor.



6. The dilation has center C. Find the values of x , y , and z .



7. Find the value of y . Round to the nearest tenth, if necessary.

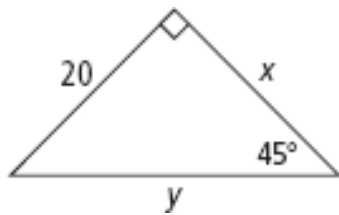


8. Which set of numbers can represent the side lengths of an obtuse triangle?

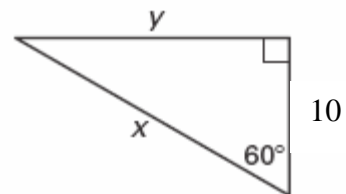
- (A) 6, 9, 10 (B) 6, 10, 10 (C) 0.6, 0.8, 1.0 (D) $\sqrt{8}$, 4, 6

9. Find the values of x and y . Express answers in simplest radical form.

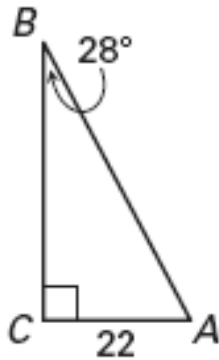
(a)



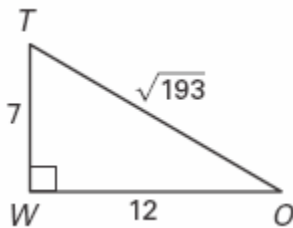
(b)



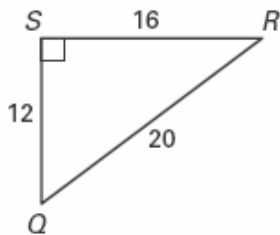
10. Find the perimeter of the triangle.



11. Find the cosine of $\angle T$. Round to four decimal places.



12. Find the measure of $\angle Q$.



\vec{BA}

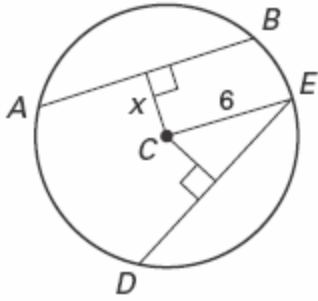
13. If $m\angle A = 50^\circ$, $m\angle B = 65^\circ$, and $a = 10$, find the value of b using the Law of Sines:

$$\frac{a}{\sin \angle A} = \frac{b}{\sin \angle B} = \frac{c}{\sin \angle C}$$

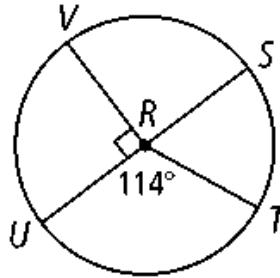
14. If $a = 18$, $b = 20$, and $m\angle C = 50^\circ$, find the value of c using the Law of Cosines:

$$c^2 = a^2 + b^2 - 2ab(\cos \angle C)$$

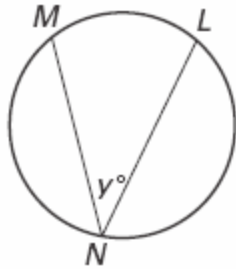
15. Find x , given $AB = DE = 8$ and radius = 6.



16. Find \widehat{ST} .

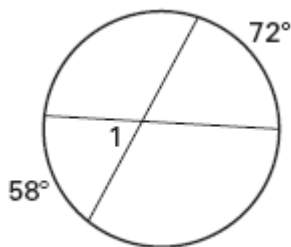


17. If $m\widehat{LNM} = 240^\circ$, find the value of y .

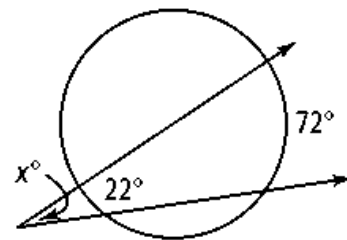


18. Find the measure of the marked angle in each diagram.

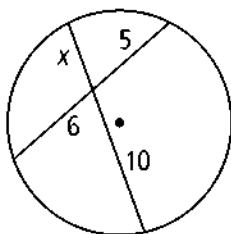
(a)



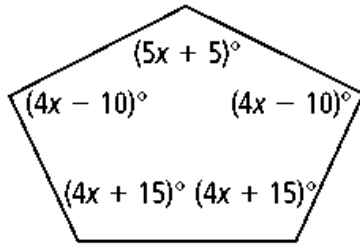
(b)



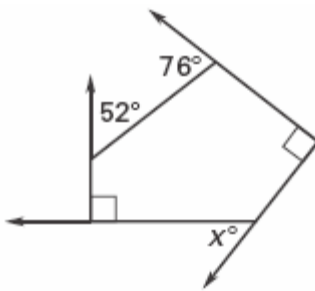
19. Find the value of x .



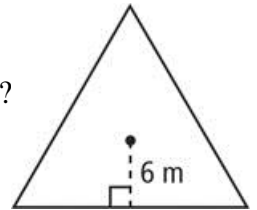
20. Find the value of x .



21. Find the value of x .



22. What is the approximate area of the inscribed regular polygon shown to the right?



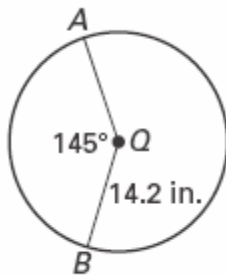
23. The ratio of the side lengths of two similar triangles is 3:5. What is the ratio of their:

(a) perimeters

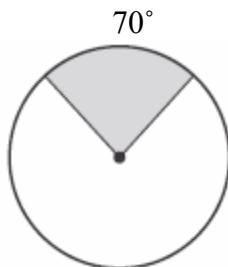
(b) areas

(c) volumes

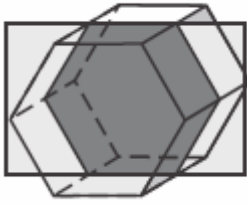
24. Find the length of \widehat{AB} .



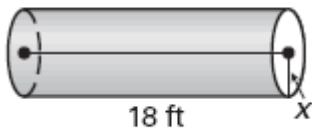
25. Find the radius of the circle if the area of the shaded region is 5.5 in^2 .



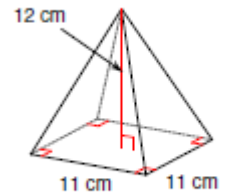
26. Describe the cross section of the figure shown.



27. What is the value of x if the cylinder has a volume of 475ft^3 ?



28. Find the volume of the pyramid.



29. Two pyramids are similar with a scale factor of 1:3.
Find the volume of the first pyramid given that the volume of the second is 135ft^3 .

30. What is the probability of rolling a number greater than 4 on a cube?

For questions, 31 and 32 use the table below. The table below shows the results of a soccer team's scores for games played this season.

Goals	0	1	2	3
Frequency	4	8	6	3

31. How many games did the team play?

32. What is the relative frequency of games with 0 goals scored?

33. In one class, 12% of the students received an A on the last test and 16% of the students received a C. What is the probability that a randomly chosen student received an A or a C?

34. The table below shows the number of freshmen, sophomores, juniors, and seniors involved in basketball, soccer, and volleyball. What is the probability that a randomly selected student is a freshman or plays soccer?

Sport	Freshmen	Sophomores	Juniors	Seniors	Total:
Basketball	7	6	5	6	24
Soccer	6	4	8	7	25
Volleyball	9	2	4	6	21
Total:	22	12	17	19	70

35. Shannon will be assigned at random to 1 of 7 math classes throughout the day and 1 of 3 lunch times. What is the probability that she will be in the third math class and the third lunch?

GEOMETRY SEMESTER 2 FINAL REVIEW #2 ANSWERS

- $x=9; y=12$
- $y=40$
- A
- B
- Enlargement; $\frac{12}{5}$
- $x=20; y=20; z=25$
- $x=15.3$
- D
- a. $x=20; y=20\sqrt{2}$ b. $x=20; y=10\sqrt{3}$
- 110.3
- 0.5039
- $12.53.1^\circ$
- 11.8
- 16.2
- $2\sqrt{5}=4.5$
- 66°
- 60°
- a. 65° b. 25°
- $x=3$
- $x=25$
- 52
- 187.1
- a. 3:5 b. 9:25 c. 27:125
- 35.9in
- 3.00
- Hexagon
- 2.9 ft
- 484 cubic ft.
- 5 cubic ft.
- $\frac{1}{3}$
- 21
- $\frac{4}{21}$
- 0.28
- $\frac{41}{70}$
- $\frac{1}{21}$

