

Warm Up 99

1. rectangular pyramid
2. 11.025 cm^3
3. B

Lesson Practice 99

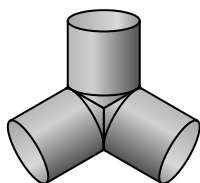
- a. 53.33 inches
- b. 323.56 square inches
- c. 765.63 cubic inches
- d. 2317 m^3

Practice 99

1. $x = 50.3$

2. $630(1 + \sqrt{3})$

3. Sample:



4. $24 \text{ cm}^2, 48 \text{ cm}^2, 72 \text{ cm}^2$

5. $P = 75 \text{ in.}$; base length = 7.5 in., width = 5 in., sloping edge = 12.5 in.

6. a. $x = 1$

b. The lines become closer and closer to horizontal and their y -intercepts become larger and larger.

7. 50°

8. 2:1

9. angle at art museum: 74.7° , angle at park: 47.2° , angle at fountain: 58.1° 10. perimeter ratio is 8:13;
area ratio is $\frac{64}{169}$

11. 80 minutes

12. 9.42 in^2 13. $AB \approx 9.2, AD \approx 9.2;$
 $BC \approx 13.9, CD \approx 13.9$ 14. $47^\circ, 104^\circ, 29^\circ$

15. 8.2

16. a. 106 mm

b. 582 mm^2

17. $\tan \theta = \frac{\sqrt{1 - \cos \theta}}{\cos \theta}$

18. Each face of the triangular pyramid is an equilateral triangle. If the side length of each face is a , then, because each face can be split into two 30° - 60° - 90° triangles, the area of each face is $\frac{\sqrt{3}}{4}a^2$. Similarly, the area of each face on the other pyramid is $\frac{\sqrt{3}}{4}b^2$. So the ratio of the area of their faces is $a^2:b^2$

19. ZX, XC, ZC

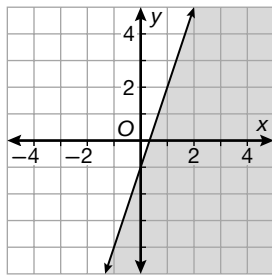
20. 109.96 in^2

21. $\sqrt{6x - 9}$

22. 57°

23. She multiplied 4 by 4 instead of adding them to find TF and FR .

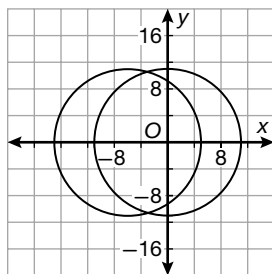
24. $y \leq 3x - 1$;



25. $A: 31,700 \text{ mm}^2$;
 $B: 198,125 \text{ mm}^2$

26. C

27. $(x + 6)^2 + y^2 = 121$;



28. C

29. 40 inches

30. slopes of \overline{PQ} , \overline{QR} , \overline{RS} , and \overline{PS} are $-\frac{2}{3}$, $\frac{1}{2}$, -3 , and $\frac{1}{2}$; $\overline{QR} \parallel \overline{PS}$ and \overline{PQ} is not parallel to \overline{RS} , so $PQRS$ is a trapezoid