Answers for Lesson 10-2, pp. 542–544 Exercises

1. 472 in.^{2} **2.** 144.5 cm^2 **3.** 108 ft^2

4. 110,622 mi^2 **5.** 150 cm^2 **6.** $\frac{5}{6}$ ft^2

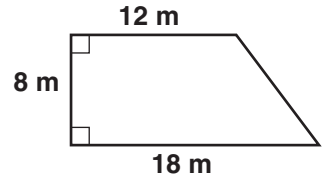
7. about 43,290 mi^2 **8.** 30 ft^2 **9.** 72 m^2

10. $52\sqrt{3}$ ft^2 **11.** 80 in.^{2} **12.** 18 m^2

13. 24 ft^2 **14.** 1200 ft^2 **15.** 96 in.^{2}

16. 24 m^2 **17.** 20 in.^{2}

18. a.



b. 48 m

c. 120 m^2

19. Check students' work. **20.** 9 cm^2

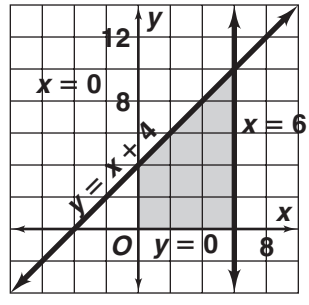
21. 19.5 cm^2 **22.** 11.3 cm^2

23. 49.9 ft^2 **24.** 1.8 m^2

25. 18 units^2 **26.** 15 units^2

27. 15 units^2 **28.** C

29. a.



b. trapezoid

c. 42 units^2

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30. 18 cm^2

31. $32\sqrt{3}$ m^2

32. $\frac{128\sqrt{3}}{3}$ $in.^2$

33. **a.** $A = \frac{1}{2}b_1h$; $A = \frac{1}{2}b_2h$

b. The area of the trapezoid is the sum of the areas of the triangles, so $A = \frac{1}{2}b_1h + \frac{1}{2}b_2h = \frac{1}{2}h(b_1 + b_2)$.

34. Sample: Each kite section is one-half of the corresponding rectangle section.

35. $b_1 = 12$ cm, $b_2 = 24$ cm, $h = 18$ cm

36. 1.5 m^2

37. $100 + 50\sqrt{3}$ or about 186.6 $in.^2$

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