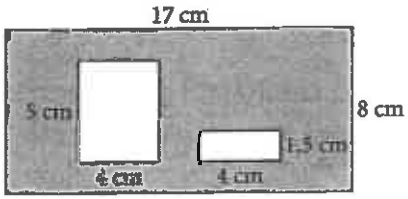
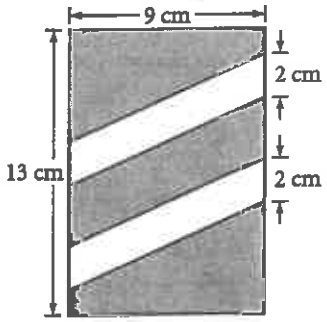
Lesson 8.1 • Areas of Rectangles and Parallelograms

Name _____ Period _____ Date _____

1. Find the area of the shaded region.

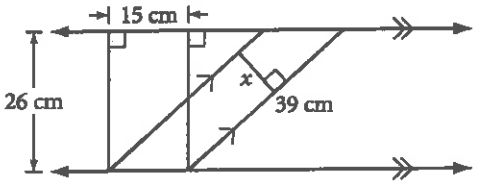


2. Find the area of the shaded region.

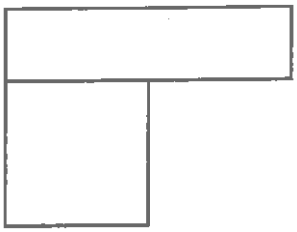


3. Rectangle *ABCD* has area 2684 m² and width 44 m. Find its length.

4. Find x.

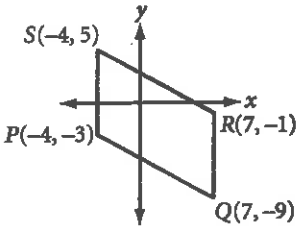


5. The rectangle and the square have equal area. The rectangle is 12 ft by 21 ft 4 in. What is the perimeter of the entire hexagon in feet?

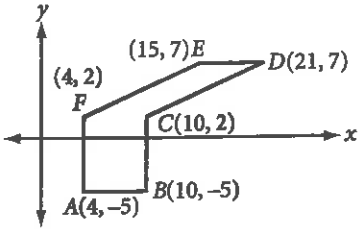


6. Draw a parallelogram with area 85 cm² and an angle with measure 40°. Is your parallelogram unique? If not, draw a different one.

7. Find the area of *PQRS*.



8. Find the area of *ABCDEF*.



9. An acre is equal to 43,560 ft². A 4-acre rectangular pasture has a 250-foot side that is 40 feet from the nearest road. To the nearest foot, what is the distance from the road to the far fence?

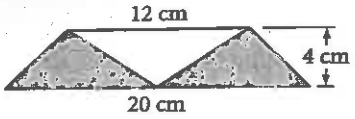
10. A *section* of land is a square piece of land 1 mile on a side. How many acres are in a section? (1 mile = 5280 feet)

11. Dana buys a piece of carpet that measures 20 square yards. Will she be able to completely cover a rectangular floor that measures 12 ft 6 in. by 16 ft 6 in.? Explain why or why not.

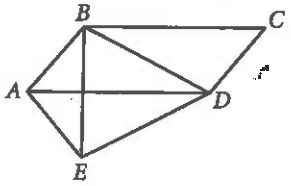
Lesson 8.2 • Areas of Triangles, Trapezoids, and Kites

Name _____ Period _____ Date _____

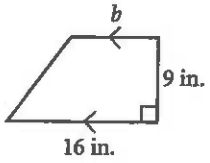
1. Find the area of the shaded region.



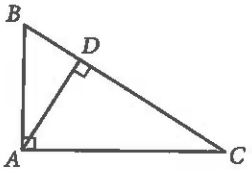
2. *ABCD* is a parallelogram, *ABDE* is a kite, $AD = 18$ cm, and $BE = 10$ cm. Find the area of *ABCDE*.



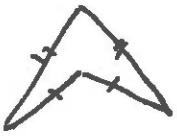
3. Area = 126 in.^{2}. b = _____.



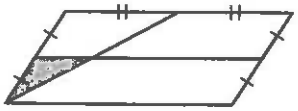
4. $AB = 6$ cm, $AC = 8$ cm, and $BC = 10$ cm. Find *AD*.



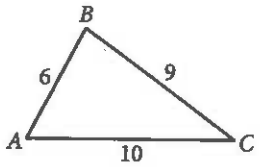
5. A concave kite (dart) has diagonals measuring 13 cm and 19 cm. What is its area?



6. The shaded area is what fraction of the large parallelogram?

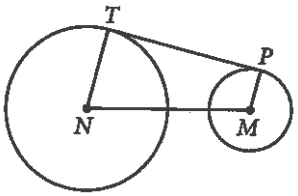


7. Explain why the area of this triangle cannot be greater than 27.

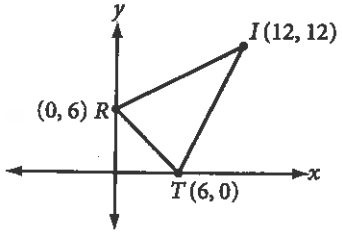


8. A midsegment of a triangle divides the triangle into a triangle and a trapezoid. If the original triangle has area 64 in.^{2}, what is the area of the trapezoid?

9. $\overline{TP}$ is tangent to circles *M* and *N*. $TP = 16$ cm. The radius of *N* is 7 cm and the radius of *M* is 4 cm. Find the area of *NMPT*.



10. Find the area of $\triangle TRI$.



11. Find the area of *HEXAGN*.