GRADE 7 · UNIT 4 · PRACTICE TEST

Area

24 points

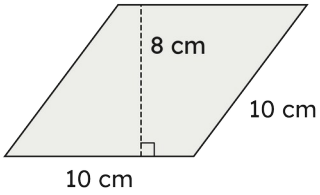
Name_____
Date_____
Period_____

Show your work for problems that require calculations. Each numbered question or lettered part is worth 1 point. Use 3.14 for π unless the question says otherwise.

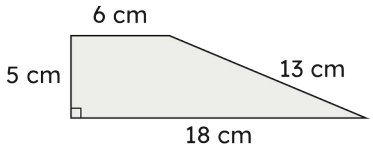
Trapezoids, parallelograms and rhombi

6 points

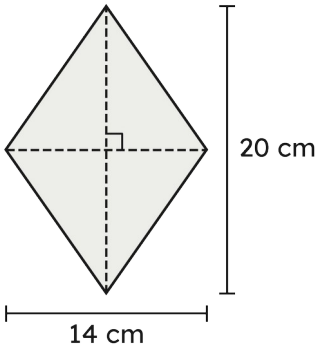
1. Find the area of the parallelogram. *1 pt*



2. Find the area of the trapezoid. *1 pt*



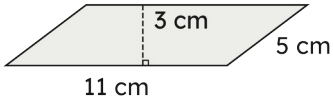
3. The diagonals of the rhombus cut it into four identical right triangles.



a. Find the area of one of the four triangles. *1 pt*

b. Find the area of the rhombus. *1 pt*

4. Ava says the area of the parallelogram is 33 cm^2. Diego says it is 55 cm^2.



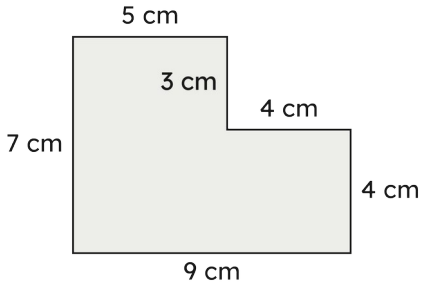
a. Who is right? *1 pt*

b. Explain the mistake the other student made. *1 pt*

Composite figures

5 points

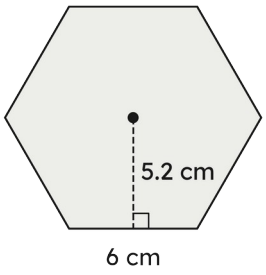
5. Cut the figure into two rectangles.



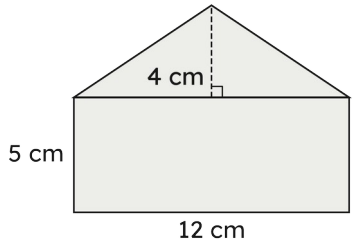
a. Find the area of each rectangle. *1 pt*

b. Find the area of the whole figure. *1 pt*

6. The regular hexagon has sides of 6 cm. The distance from its center to each side is 5.2 cm. Find its area. *1 pt*



7. A rectangle has a triangle on top. The dashed line is the height of the triangle.



a. Find the area of the triangle. *1 pt*

b. Find the area of the whole figure. *1 pt*

Circumference *6 points*

8. A circle has a diameter of 8 cm. Find its circumference. *1 pt*

9. A circle has a radius of 7.5 m. Find its circumference in terms of π. *1 pt*

10. A circular table has a diameter of 28 inches. Use 22/7 for π. Find the distance around the table. *1 pt*

11. The circumference of a circle is 18.84 cm. Find its diameter. *1 pt*

12. A round table has a radius of 60 cm.

a. Find the circumference of the table. *1 pt*

b. A ribbon goes around the edge of the table twice. How long is the ribbon? *1 pt*

Area of a circle

7 points

13. A circle has a radius of 3 cm. Find its area. *1 pt*

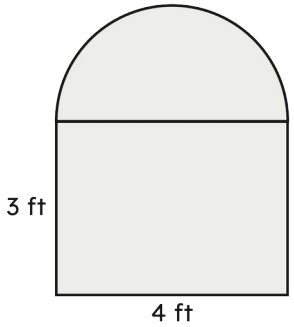
14. A circle has a diameter of 10 in. Find its area in terms of π. *1 pt*

15. A pizza has a diameter of 21 inches and is cut into 6 equal slices. Use 22/7 for π.

a. Find the area of the whole pizza. *1 pt*

b. Mikel eats 2 slices. How many square inches of pizza does he eat? *1 pt*

16. A window is a rectangle with a semicircle on top. The semicircle's diameter is the 4 ft side.



a. Find the area of the semicircle. *1 pt*

b. Find the area of the whole window. *1 pt*

17. The radius of a circle is doubled from 5 cm to 10 cm. Jamal says the area doubles too. Explain why Jamal is wrong. *1 pt*