

# Geometry and Measurement Practice Problems

Mathematics · Practice Test · 33 Questions

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**1. What is the accuracy required for rounding in problem 1?**

- A) 100 meters
- B) 10 meters
- C) 1000 meters
- D) 1 meter

**2. Which of the following is an exact value?**

- A) The number of seats in the Riksdag
- B) Melina's height
- C) The population of Denmark
- D) Lykke paying with a 500-kronor bill

**3. If a pack of two t-shirts costs 289 kr, what is the estimated price of one t-shirt?**

- A) 145 kr
- B) 144.50 kr
- C) 150 kr
- D) 140 kr

**4. Convert 750 cm to meters.**

- A) 7.5 m
- B) 0.75 m
- C) 75 m
- D) 7500 m

**5. Calculate the perimeter of the figure.**

- A) 11.1 cm
- B) 11.1 cm
- C) 11 cm
- D) 11.2 cm

**6. Calculate the area of the parallelogram.**

- A) 1700 m<sup>2</sup>
- B) 170 m<sup>2</sup>
- C) 17000 m<sup>2</sup>
- D) 17 m<sup>2</sup>

**7. Calculate the area of the triangle.**

- A)  $12 \text{ cm}^2$
- B)  $120 \text{ cm}^2$
- C)  $6 \text{ cm}^2$
- D)  $1.2 \text{ cm}^2$

**8. Calculate the area of the polygon.**

- A)  $6.5 \text{ cm}^2$
- B)  $65 \text{ cm}^2$
- C)  $650 \text{ cm}^2$
- D)  $0.65 \text{ cm}^2$

**9. What is the side length of a square with an area of  $49 \text{ cm}^2$ ?**

- A) 7 cm
- B) 24.5 cm
- C) 12.25 cm
- D) 2401 cm

**10. Calculate the hypotenuse of a right-angled triangle with legs of 9 and 12.**

- A) 15
- B) 21
- C) 180
- D) 225

**11. Calculate the unknown leg of a right-angled triangle if the hypotenuse is 50 and one leg is 48.**

- A) 14
- B) 12
- C) 98
- D) 2500

**12. Calculate the ratio between the circumference and diameter of a pipe with a circumference of 15 cm and a diameter of 4.8 cm, rounded to two decimal places.**

- A) 3.13
- B) 3.125
- C) 3.14
- D) 3.12

**13. Calculate the circumference of a circle with a radius of 14 cm.**

- A) 87.96 cm
- B) 43.98 cm
- C) 28 cm
- D) 27.99 cm

**14. Calculate the area of a circle with a radius of 8.8 cm.**

- A) 246.30 cm<sup>2</sup>
- B) 4.4 cm<sup>2</sup>
- C) 25.64 cm<sup>2</sup>
- D) 4.4 cm

**15. Calculate the radius of a circle with an area of 12.0 m<sup>2</sup>.**

- A) 1.95 m
- B) 3.89 m
- C) 1.09 m
- D) 0.97 m

**16. Calculate the circumference of a circle with a diameter of 45 cm.**

- A) 141.37 cm
- B) 70.69 cm
- C) 22.5 cm
- D) 45 cm

**17. Calculate the arc length of a 100° arc on a circle with a diameter of 82 cm.**

- A) 71.77 cm
- B) 143.54 cm
- C) 257.61 cm
- D) 82 cm

**18. Calculate the area of a sector with a radius of 25 cm and a central angle of 85°.**

- A) 552.91 cm<sup>2</sup>
- B) 1178.10 cm<sup>2</sup>
- C) 106.25 cm<sup>2</sup>
- D) 85 cm<sup>2</sup>

**19. Calculate the area of a cross-section of a tree with a circumference of 87 cm.**

- A) 604.5 cm<sup>2</sup>
- B) 1209 cm<sup>2</sup>
- C) 19.4 cm<sup>2</sup>
- D) 38.7 cm<sup>2</sup>

**20. On what area can a dog move if it's tethered to a wall with a 7.0 m rope?**

- A)  $49 \text{ m}^2$
- B)  $153.9 \text{ m}^2$
- C)  $38.5 \text{ m}^2$
- D)  $154 \text{ m}^2$

**21. Calculate the area of a regular hexagon with a side length of 44 cm.**

- A)  $1284.3 \text{ cm}^2$
- B)  $75.4 \text{ cm}^2$
- C)  $6338.9 \text{ cm}^2$
- D)  $12677.8 \text{ cm}^2$

**22. How far does a car travel when its 70 cm diameter tire spins 4,000 revolutions?**

- A) 8.8 km
- B) 88 km
- C) 880 km
- D) 0.88 km

**23. What is the area of a square with a side length of 5.0 cm?**

- A)  $25 \text{ cm}^2$
- B)  $10 \text{ cm}^2$
- C)  $20 \text{ cm}^2$
- D)  $5 \text{ cm}^2$

**24. Calculate the area of the colored region (a circle inside a square).**

- A)  $19.63 \text{ cm}^2$
- B)  $5.37 \text{ cm}^2$
- C)  $25 \text{ cm}^2$
- D)  $14.63 \text{ cm}^2$

**25. Calculate the circumference of a circle with a radius of 11.8 cm.**

- A) 74.1 cm
- B) 23.6 cm
- C) 37.07 cm
- D) 137.4 cm

**26. Calculate the area of a circle with a radius of 6.0 m. If the radius increases by 3.0 m, how much does the area increase?**

- A)  $28.27 \text{ m}^2$
- B)  $63.62 \text{ m}^2$
- C)  $94.25 \text{ m}^2$
- D)  $35.34 \text{ m}^2$

**27. Calculate the area of the colored region.**

- A)  $10.18 \text{ cm}^2$
- B)  $3.14 \text{ cm}^2$
- C)  $6.28 \text{ cm}^2$
- D)  $2.0 \text{ cm}^2$

**28. Calculate the area of the part of the ceramic stove outside the circles.**

- A)  $2720 \text{ cm}^2$
- B)  $1360 \text{ cm}^2$
- C)  $1450 \text{ cm}^2$
- D)  $59 \text{ cm}^2$

**29. How long does it take for the Earth to complete one orbit around the Sun if the distance is 150,000,000 km and the speed is approximately 30 km/s?**

- A) 5,000,000 seconds
- B) 50,000,000 seconds
- C) 5,000,000 minutes
- D) 5,000,000 hours

**30. Calculate the area of the yellow region in a wrestling mat.**

- A)  $10.1 \text{ m}^2$
- B)  $70.8 \text{ m}^2$
- C)  $101 \text{ m}^2$
- D)  $110 \text{ m}^2$

**31. What is the area of a parallelogram with a base of 4.5 cm and a height of 2.8 cm?**

- A)  $12.6 \text{ cm}^2$
- B)  $7.3 \text{ cm}^2$
- C)  $12 \text{ cm}^2$
- D)  $13 \text{ cm}^2$

**32. Calculate the area of a trapezoid with parallel sides of 4.1 cm and 4.5 cm, and a height of 2.8 cm.**

- A)  $12.04 \text{ cm}^2$
- B)  $12 \text{ cm}^2$
- C)  $15.96 \text{ cm}^2$
- D)  $8.6 \text{ cm}^2$

**33. Calculate the area of a polygon.**

- A) 163400 m<sup>2</sup>
- B) 160000 m<sup>2</sup>
- C) 16 ha
- D) 160 ha