

Brett Robbins Academic Consulting

Mathematics 10C Practice Test

Unit 7: Measurement

25 Questions

Original practice questions written to the Alberta curriculum, in the style of past diploma examinations. Work through each question, then check your answers with the key at the end.

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, contact Brett for clarification.

Question 1

The length 3.5 m, expressed in centimetres, is

- | | |
|------------|------------|
| A) 0.35 cm | B) 35 cm |
| C) 350 cm | D) 3500 cm |

Question 2

A board is 48 inches long. The length of the board, in feet, is

- | | |
|----------|-----------|
| A) 2 ft | B) 4 ft |
| C) 12 ft | D) 576 ft |

Question 3

A rectangular prism has a length of 8 cm, a width of 5 cm, and a height of 3 cm.

The volume of the prism is

- | | |
|-----------------------|-----------------------|
| A) 40 cm^3 | B) 55 cm^3 |
| C) 158 cm^3 | D) 120 cm^3 |

Question 4

The surface area of a cube with an edge length of 5 cm is

- | | |
|-----------------------|-----------------------|
| A) 150 cm^2 | B) 125 cm^2 |
| C) 100 cm^2 | D) 25 cm^2 |

Question 5

The most reasonable height for an interior door in a house is

- | | |
|----------|-----------|
| A) 21 cm | B) 2.1 m |
| C) 21 m | D) 0.21 m |

Question 6

A cylinder has a radius of 3 cm and a height of 10 cm.

Using the π key on your calculator, the volume of the cylinder, to the nearest tenth, is

- | | |
|--------------------------|--------------------------|
| A) 94.2 cm ³ | B) 188.5 cm ³ |
| C) 282.7 cm ³ | D) 565.5 cm ³ |

Question 7

Using the conversion 1 in = 2.54 cm, the diagonal measure of a 32 inch television screen, in centimetres, is

- | | |
|-------------|-------------|
| A) 81.28 cm | B) 12.60 cm |
| C) 68.58 cm | D) 254 cm |

Question 8

A closed cylinder has a radius of 4 cm and a height of 9 cm.

Using the π key on your calculator, the surface area of the cylinder, to the nearest whole number, is ____ cm².

Question 9

A triangular prism has a triangular base with a base of 6 cm and a height of 4 cm.

The length of the prism is 10 cm. The volume of the prism is

- | | |
|-----------------------|-----------------------|
| A) 60 cm^3 | B) 96 cm^3 |
| C) 240 cm^3 | D) 120 cm^3 |

Question 10

A cone has a radius of 6 cm and a height of 8 cm.

Using the π key on your calculator, the volume of the cone, to the nearest tenth, is

- | | |
|-------------------------|-------------------------|
| A) 100.5 cm^3 | B) 301.6 cm^3 |
| C) 603.2 cm^3 | D) 904.8 cm^3 |

Question 11

A sphere has a radius of 7 cm.

Using the π key on your calculator, the surface area of the sphere, to the nearest whole number, is

- | | |
|-----------------------|------------------------|
| A) 154 cm^2 | B) 308 cm^2 |
| C) 616 cm^2 | D) 1437 cm^2 |

Question 12

A sphere has a radius of 3 cm.

Using the π key on your calculator, the volume of the sphere, to the nearest tenth, is ____ cm^3 .

Question 13

A square – based pyramid has a base side length of 10 cm and a height of 12 cm.

The volume of the pyramid is

- | | |
|-----------------------|------------------------|
| A) 400 cm^3 | B) 1200 cm^3 |
| C) 200 cm^3 | D) 340 cm^3 |

Question 14

A driveway is 5 yd long. The length of the driveway, in inches, is

- | | |
|----------|-----------|
| A) 15 in | B) 60 in |
| C) 96 in | D) 180 in |

Question 15

A fish tank measures 60 cm by 40 cm by 35 cm.

Given that $1 \text{ L} = 1000 \text{ cm}^3$, the number of litres of water the tank can hold is ____ L.

Question 16

A closed cylindrical can has a radius of 5 cm and a height of 12 cm.

Using the π key on your calculator, the amount of metal needed to make the can, to the nearest tenth, is

- | | |
|-------------------------|-------------------------|
| A) 377.0 cm^2 | B) 219.9 cm^2 |
| C) 534.1 cm^2 | D) 659.7 cm^2 |

Question 17

Using the approximate conversion $1 \text{ kg} = 2.2 \text{ lb}$, a mass of 15 kg is approximately

- A) 6.8 lb B) 33 lb
- C) 30 lb D) 37.5 lb

Question 18

A square – based pyramid has a base side length of 8 cm and a slant height of 5 cm.

The surface area of the pyramid is ____ cm^2 .

Question 19

A floor has an area of 12 m^2 . The area of the floor, in square centimetres, is

- A) 120000 cm² B) 1200 cm²
C) 120 cm² D) 12000 cm²

Question 20

A cone has a radius of 3 cm and a slant height of 7 cm.

Using 3.14 for π , the surface area of the cone, to the nearest tenth, is _____ cm^2 .

Question 21

A cylindrical water tank has a diameter of 2 m and a height of 3 m.

Using the π key on your calculator, the volume of water the tank can hold, to the nearest whole number, is

- A) 3 m^3
B) 19 m^3
C) 38 m^3
D) 9 m^3

Question 22

A solid is made up of a cylinder with a radius of 2 cm and a height of 6 cm, with a hemisphere of radius 2 cm sitting on top of the cylinder.

Using the π key on your calculator, the total volume of the solid, to the nearest tenth, is ____ cm^3 .

Question 23

An open rectangular box (with no top) has a length of 10 cm, a width of 6 cm, and a height of 4 cm.

The surface area of the box is

A) 248 cm^2

B) 240 cm^2

C) 188 cm^2

D) 128 cm^2

Question 24

A student is 5 ft 9 in tall. Using the conversion 1 in = 2.54 cm, the student's height, to the nearest tenth of a centimetre, is

A) 165.1 cm

B) 175.3 cm

C) 177.8 cm

D) 160.0 cm

Question 25

Small cubes with an edge length of 2 cm are packed into a box that measures 12 cm by 8 cm by 6 cm. The number of small cubes that fit in the box is ____.

Answer Key

- | | | |
|--------|-----------|----------|
| 1. C | 10. B | 19. A |
| 2. B | 11. C | 20. 94.2 |
| 3. D | 12. 113.1 | 21. D |
| 4. A | 13. A | 22. 92.2 |
| 5. B | 14. D | 23. C |
| 6. C | 15. 84 | 24. B |
| 7. A | 16. C | 25. 72 |
| 8. 327 | 17. B | |
| 9. D | 18. 144 | |

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