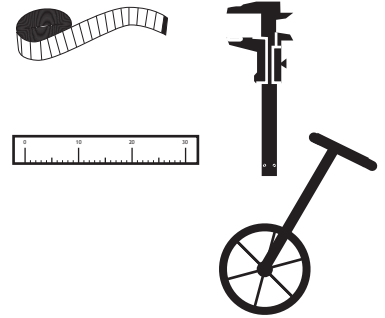


Math 10C: Measurement PRACTICE EXAM

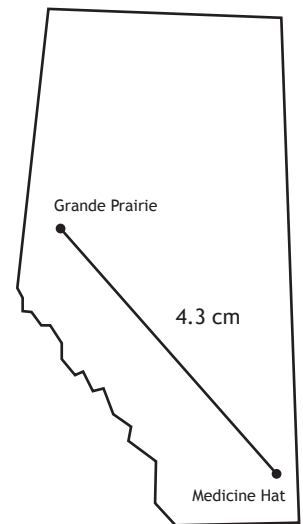
1. The distance from your house to a friend's house is best measured using:

- A. a tape measure.
- B. a 30 cm ruler.
- C. Vernier calipers.
- D. a trundle wheel.



2. The actual distance between Grande Prairie and Medicine Hat is:

- A. 430 km
- B. 508 km
- C. 787 km
- D. 896 km



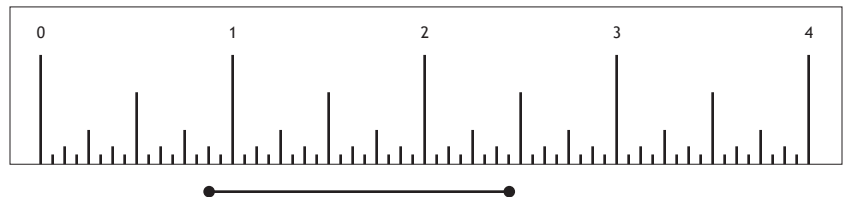
Map Scale: 1:18,300,000

3. The diameter of a trundle wheel is 45 cm. If a person walks for 0.7 km, how many times has the wheel rotated?

- A. 495
- B. 644
- C. 781
- D. 905

4. The length of the line segment is:

- A. 1.2"
- B. $1\frac{5}{16}$ "
- C. 1.5"
- D. $1\frac{9}{16}$ "

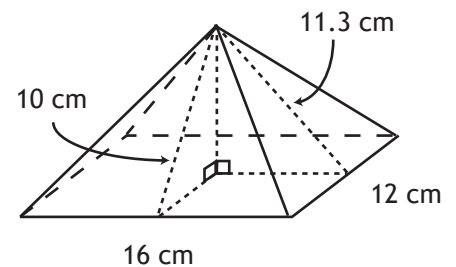


5. 4 yd. is equivalent to:
- A. 144"
 - B. 16 ft.
 - C. 0.05 mi.
 - D. 320 cm
6. 12000 ft. is equivalent to:
- A. 120000"
 - B. 368000 cm
 - C. 4200 yd.
 - D. 2.27 mi.
7. 3 mi. is equivalent to:
- A. 4600 m
 - B. 5400 yd.
 - C. 4.83 km
 - D. 15600 ft.
8. 12 m is equivalent to:
- A. 0.12 km
 - B. 11 yd.
 - C. 19308 mi.
 - D. 472.44"
9. 400 m is equivalent to:
- A. 0.25 mi.
 - B. 0.04 km
 - C. 400 yd
 - D. 4000"
10. Five students measure their height using different units. Andrew is 176 cm, Brittney is 5'4", Calvin is 1.8 yards, Don is 54 inches, and Elisha is 1.6 metres. From shortest to tallest, the order of the students is:
- A. Don, Andrew, Brittney, Calvin, Elisha
 - B. Don, Elisha, Brittney, Calvin, Andrew
 - C. Brittney, Elisha, Calvin, Don, Andrew
 - D. Calvin, Andrew, Don, Brittney, Elisha

11. A homeowner is laying sod in her lawn. The lawn is a rectangle with dimensions of $28' \times 18'$. If one piece of sod is a rectangle with dimensions of $60 \text{ cm} \times 40 \text{ cm}$, approximately how many pieces of sod should the homeowner order?
- A. 195
 B. 245
 C. 295
 D. 345

12. The surface area of the rectangular pyramid is:

- A. 478 cm^2
 B. 483 cm^2
 C. 488 cm^2
 D. 493 cm^2



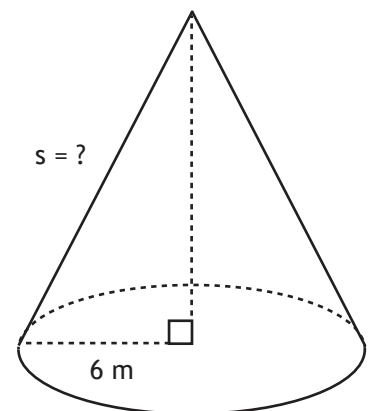
13. The slant height of the cone is:

- A. 11 m
 B. 12 m
 C. 13 m
 D. 14 m

Cone Data

$$SA = 320.44 \text{ m}^2$$

$$V = 347.57 \text{ m}^3$$



14. A square pyramid has a base measuring 5 ft. by 5 ft. The height of the pyramid, from the centre of the base to the apex is 7 ft. Calculate the surface area of the pyramid.

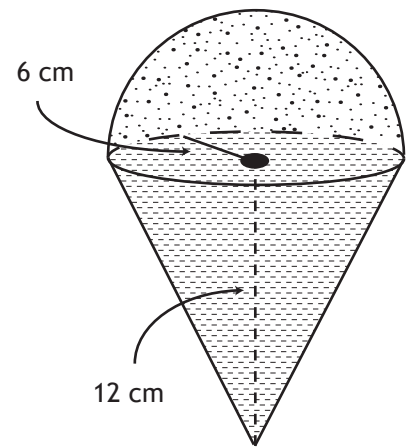
- A. 99 ft^2
 B. 104 ft^2
 C. 109 ft^2
 D. 114 ft^2

15. A cylindrical water tank with an open top has a volume of 5702 m^3 and a radius of 11 m. Calculate the height of the tank.

- A. 14 m
 B. 15 m
 C. 16 m
 D. 17 m

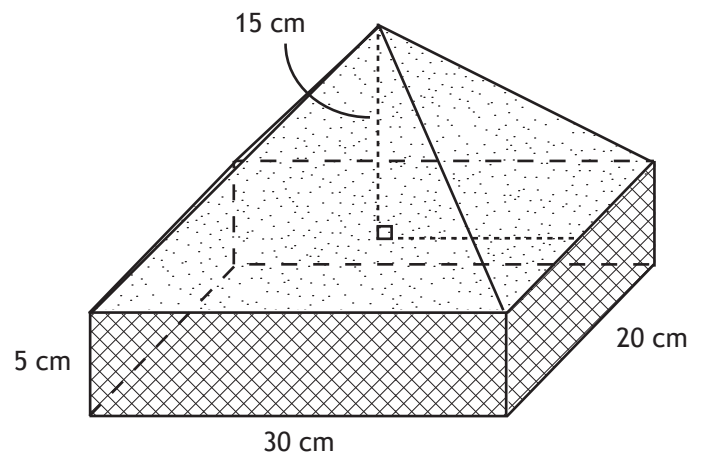
16. The volume of the 3-D object shown is:

- A. 905 cm^3
- B. 910 cm^3
- C. 915 cm^3
- D. 920 cm^3



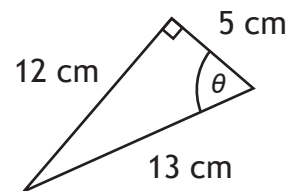
17. The surface area of the 3-D object shown is:

- A. 2060 cm^2
- B. 2065 cm^2
- C. 2070 cm^2
- D. 2075 cm^2



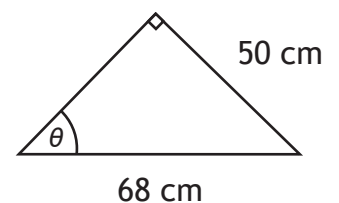
18. The cosine ratio for the angle θ is:

- A. 0.2000
- B. 0.3846
- C. 0.9231
- D. 2.4000



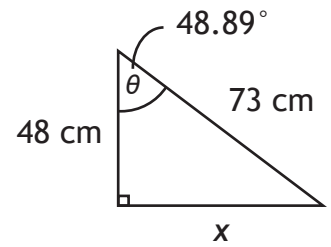
19. The angle θ in the triangle shown is:

- A. 42°
- B. 47°
- C. 52°
- D. 57°



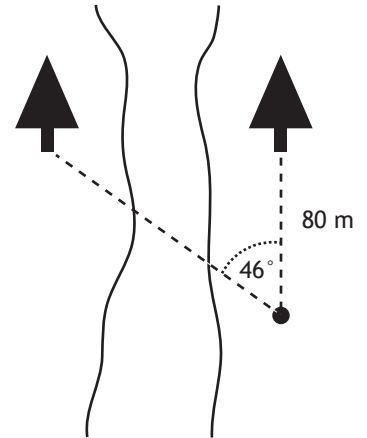
20. The value of x is:

- A. 40 cm
- B. 45 cm
- C. 50 cm
- D. 55 cm



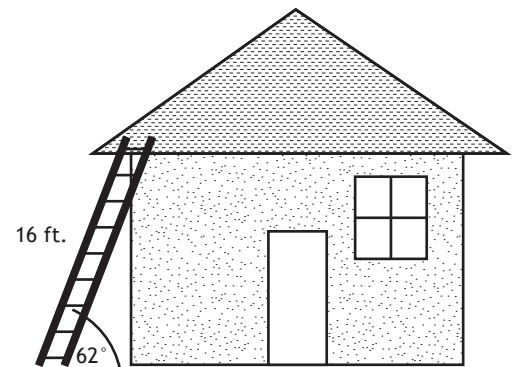
21. The sketch on the right was drawn by a surveyor who is trying to determine the distance between two trees across a river. Using the information in the sketch, calculate the distance between the trees.

- A. 83 m
- B. 88 m
- C. 93 m
- D. 98 m



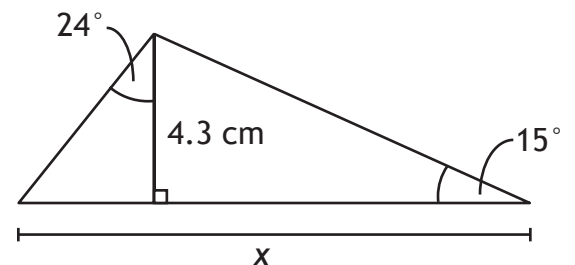
22. A 16 ft. ladder is leaning against the roof of a house. The angle between the ladder and the ground is 62° . How high above the ground is the base of the roof?

- A. 8 ft.
- B. 10 ft.
- C. 12 ft.
- D. 14 ft.



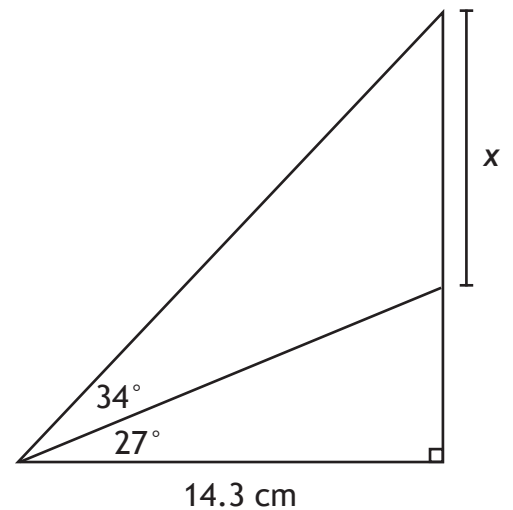
23. The value of x is:

- A. 17.9 cm
- B. 18.4 cm
- C. 18.9 cm
- D. 19.4 cm



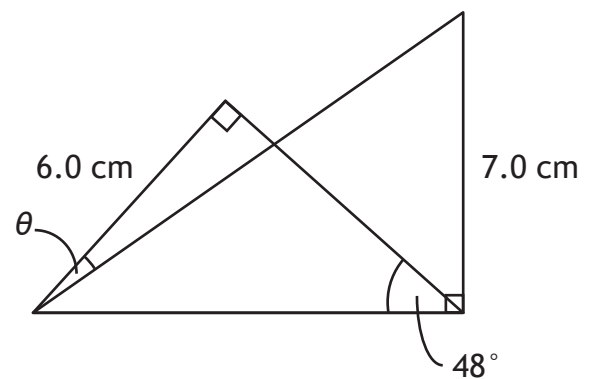
24. The value of x is:

- A. 17.5 cm
- B. 18.0 cm
- C. 18.5 cm
- D. 19.0 cm



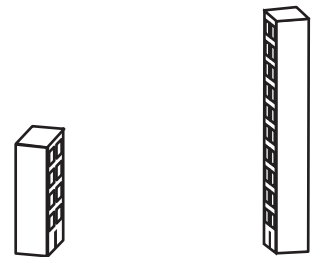
25. The value of θ is:

- A. 1.2°
- B. 2.8°
- C. 3.5°
- D. 4.4°



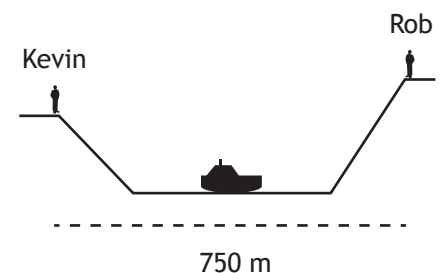
26. Janis lives on the 4th floor of her apartment building. From her window, she has to tilt her head 52° upwards to see the top of the neighbouring building. She has to look down 35° to see the base of the neighbouring building. The distance between the buildings is 80 m. The height of the neighbouring building is:

- A. 148.0 m
- B. 153.5 m
- C. 158.4 m
- D. 163.9 m



27. Kevin and Rob are standing on opposite sides of Edmonton's River Valley. In order to see a boat on the river, Kevin has to look down 32° , and Rob has to look down 38° . The width of the valley is 750 m, and the boat is exactly halfway between Kevin and Rob. How much higher is Rob than Kevin?

- A. 54 m
- B. 59 m
- C. 64 m
- D. 69 m



Measurement - ANSWER KEY
Video solutions are in italics.

- | | |
|--|---|
| 1. D <i>Metric and Imperial, Introduction (b)</i> | 14. A <i>Surface Area and Volume, Example 2a</i> |
| 2. C <i>Metric and Imperial, Example 1c</i> | 15. B <i>Surface Area and Volume, Example 2b</i> |
| 3. A <i>Metric and Imperial, Example 5b</i> | 16. A <i>Surface Area and Volume, Example 3b</i> |
| 4. D <i>Metric and Imperial, Example 6e</i> | 17. B <i>Surface Area and Volume, Example 6a</i> |
| 5. A <i>Metric and Imperial, Example 8e</i> | 18. B <i>Trigonometry I, Example 1d</i> |
| 6. D <i>Metric and Imperial, Example 9f</i> | 19. B <i>Trigonometry I, Example 2d</i> |
| 7. C <i>Metric and Imperial, Example 10b</i> | 20. D <i>Trigonometry I, Example 3b</i> |
| 8. D <i>Metric and Imperial, Example 11c</i> | 21. A <i>Trigonometry I, Example 5a</i> |
| 9. A <i>Metric and Imperial, Example 11f</i> | 22. D <i>Trigonometry I, Example 5b</i> |
| 10. B <i>Metric and Imperial, Example 13a</i> | 23. A <i>Trigonometry II, Example 1a</i> |
| 11. A <i>Metric and Imperial, Example 14a</i> | 24. C <i>Trigonometry II, Example 2c</i> |
| 12. C <i>Surface Area and Volume, Intro (d)</i> | 25. A <i>Trigonometry II, Example 3b</i> |
| 13. A <i>Surface Area and Volume, Example 1b</i> | 26. C <i>Trigonometry II, Example 4a</i> |
| | 27. B <i>Trigonometry II, Example 6</i> |

Math 10C Practice Exam: Tips for Students

- Every question in the practice exam has already been covered in the Math 10C workbook. It is recommended that students refrain from looking at the practice exam until they have completed their studies for the unit.
- Do not guess on a practice exam. The practice exam is a self-diagnostic tool that can be used to identify knowledge gaps. Leave the answer blank and study the solution later.