

Grade 9 Geometry & Measurement Unit Test

Name _____ Date _____ Score _____ / 16

Part A · Angles

01

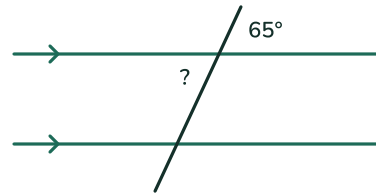
Sum of the interior angles of an 8-sided polygon =

02

Each exterior angle of a regular 5-sided polygon =

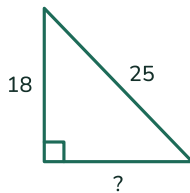
03

Sum of the interior angles of a 4-sided polygon =



04 Parallel lines. Find the missing angle =

Part B · Pythagorean Theorem



05 Find the missing leg (nearest tenth) =

06

Sides 15, 36 and 38. Is it a right triangle?

07 A gate is 135 cm wide and 84 cm tall. How long is the brace that runs corner to corner?

Answer: _____

Grade 9 Geometry & Measurement Unit Test

Part B · Pythagorean Theorem (continued)

08 A shed is 20 m wide. Its roof peak is 24 m above the top of the walls, in the middle. How long is each sloped side of the roof?

Answer: _____

Part C · Volume

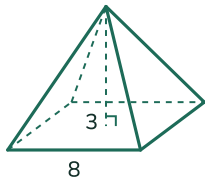
Use the π key on your calculator. Round to one decimal place where needed.



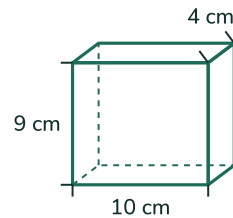
09 Cylinder, lengths in cm. _____
Volume $\approx$



10 Cone, lengths in m. Volume _____
 $\approx$



11 Square pyramid, lengths in cm. _____
Volume =



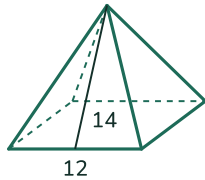
12 Find the volume = _____

Grade 9 Geometry & Measurement Unit Test

Part D • Surface Area

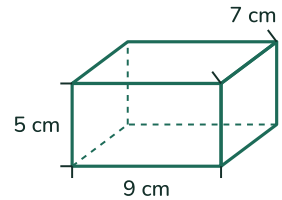
Use the π key on your calculator. Round to one decimal place where needed.

- 13** Square pyramid, lengths in cm. Surface area =



Answer: _____

- 14** Find the surface area =



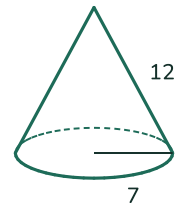
Answer: _____

- 15** Cylinder, lengths in cm. Surface area $\approx$



Answer: _____

- 16** Cone, lengths in cm. Surface area $\approx$



Answer: _____



Grade 9 Geometry & Measurement Unit Test (Answer Key)

Part A • Angles

01

Sum of the interior angles of an 8-sided polygon =

1080

02

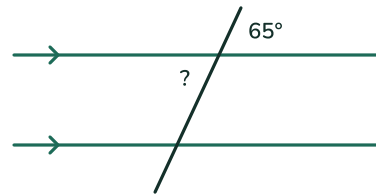
Each exterior angle of a regular 5-sided polygon =

72

03

Sum of the interior angles of a 4-sided polygon =

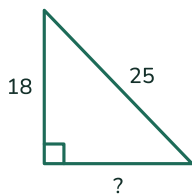
360



04 Parallel lines. Find the missing angle =

65°

Part B • Pythagorean Theorem



05 Find the missing leg (nearest tenth) =

17.3

06

Sides 15, 36 and 38. Is it a right triangle?

No: $15^2 + 36^2 \neq 38^2$

07 A gate is 135 cm wide and 84 cm tall. How long is the brace that runs corner to corner?

159 cm



Grade 9 Geometry & Measurement Unit Test (Answer Key)

Part B • Pythagorean Theorem (continued)

08 A shed is 20 m wide. Its roof peak is 24 m above the top of the walls, in the middle. How long is each sloped side of the roof?

26 m

Part C • Volume

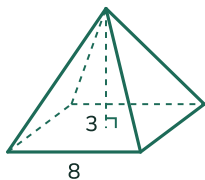
Use the π key on your calculator. Round to one decimal place where needed.



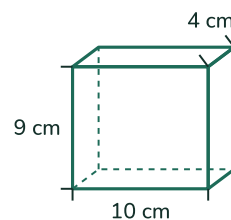
09 Cylinder, lengths in cm. Volume $\approx$ **113.1 cm³**



10 Cone, lengths in m. Volume $\approx$ **6.3 m³**



11 Square pyramid, lengths in cm. Volume = **64 cm³**



12 Find the volume = **360 cm³**

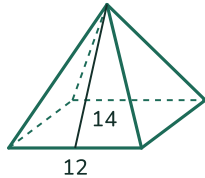


Grade 9 Geometry & Measurement Unit Test (Answer Key)

Part D • Surface Area

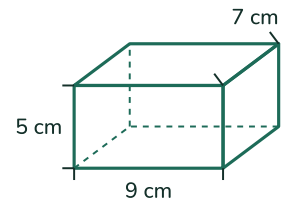
Use the π key on your calculator. Round to one decimal place where needed.

- 13** Square pyramid, lengths in cm. Surface area =



480 cm²

- 14** Find the surface area =



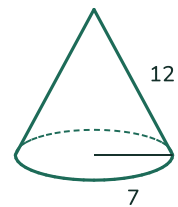
286 cm²

- 15** Cylinder, lengths in cm. Surface area $\approx$



62.8 cm²

- 16** Cone, lengths in cm. Surface area $\approx$



417.8 cm²