

Name: _____

Date: _____

Score: _____ / 17

The Pythagorean Theorem

Exact and decimal answers, plus applications to ramps, screens and diagonals.

Theorem $a^2 + b^2 = c^2$	c the hypotenuse	Missing leg $c^2 - a^2$	Round only at the end
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Section A — Find the Hypotenuse

Whole-number answers.

1. Legs 9 and 12. Hypotenuse = _____

2. Legs 8 and 15. Hypotenuse = _____

3. Legs 20 and 21. Hypotenuse = _____

4. Legs 12 and 35. Hypotenuse = _____

5. Legs 7 and 24. Hypotenuse = _____

6. Legs 10 and 24. Hypotenuse = _____

Section B — Find the Missing Leg

Whole-number answers.

7. Hypotenuse 29, one leg 20. Other leg = _____

8. Hypotenuse 37, one leg 12. Other leg = _____

9. Hypotenuse 53, one leg 28. Other leg = _____

10. Hypotenuse 65, one leg 16. Other leg = _____

Section C — Decimal Answers

Round to one decimal place.

11. Legs 5 and 9. Hypotenuse = _____ (1 d.p.)

12. Legs 7 and 11. Hypotenuse = _____ (1 d.p.)

13. Legs 4 and 6. Hypotenuse = _____ (1 d.p.)

14. Legs 8 and 13. Hypotenuse = _____ (1 d.p.)

Section D — Word Problems

Show your work.

15. A ramp rises 2.5 m over a 6 m base. Length of the ramp?

16. A TV is 48 cm by 27 cm. Diagonal to 1 d.p.?

17. Are sides 9, 40, 41 a right triangle?

The Pythagorean Theorem — Answer Key

For marking. Accept equivalent correct forms.

Section A — Find the Hypotenuse

1. 15

2. 17

3. 29

4. 37

5. 25

6. 26

Section B — Find the Missing Leg

7. 21

8. 35

9. 45

10. 63

Section C — Decimal Answers

11. 10.3

12. 13

13. 7.2

14. 15.3

Section D — Word Problems

15. 6.5 m

16. 55.1 cm

17. yes
