Unit Review

Unit 1

LESSON

1.1 **1.** Circle the perfect squares. Use a diagram to support your answer.

a) 36 b) 63 c) 121 d) 99

1.2 **2.** Simplify without using a calculator.

a) $8^2 =$ _____ b) $\sqrt{49} =$ _____

c) $12^2 =$ _____ d) $\sqrt{121} =$ _____

3. List the factors of each number in ascending order. Circle the numbers that are perfect squares.

a) 50

_____

b) 196

_____

c) 84

_____

d) 225

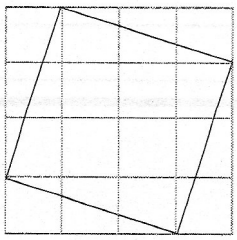
_____

1.3 **4.** The area of a square is given. Find its side length. Circle the side lengths that are whole numbers.

a) 18 cm^2 b) 169 cm^2 c) 200 cm^2

_____ _____ _____

5. Find the area of the square. Then write the side length of the square.

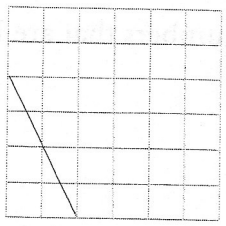


Area = _____

Side length = _____

LESSON

6. Construct a square on the line segment. Find the length of the line segment.



Length = _____

1.4 **7.** Evaluate.

a) $\sqrt{8 \times 8}$ = _____ b) $\sqrt{54 \times 54}$ = _____ c) $\sqrt{153 \times 153}$ = _____

8. Between which two whole numbers is each square root?

a) $\sqrt{45}$ _____ b) $\sqrt{18}$ _____ c) $\sqrt{55}$ _____ d) $\sqrt{135}$ _____

9. Estimate each root in question 8 to 1 decimal place.

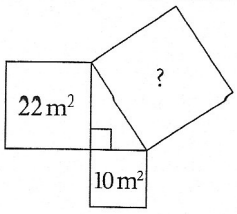
a) _____ b) _____ c) _____ d) _____

10. Circle the better estimate.

a) $\sqrt{75} \doteq$ 8.65 or 8.66? b) $\sqrt{90} \doteq$ 9.49 or 9.50?

1.5 **11.** Find the area of each indicated square.

a)



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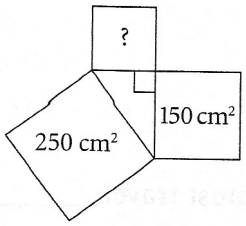
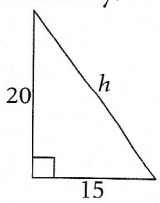


_____ _____

12. Find the length of each side labelled with a variable. Give answers to 1 decimal place, if necessary.

a)



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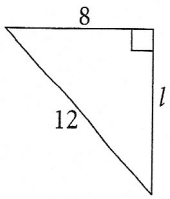

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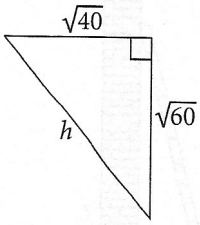
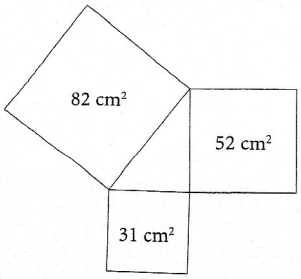


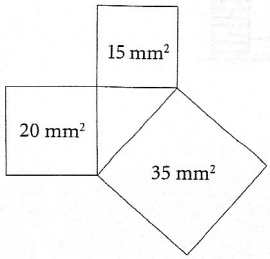
_____ _____ _____

1.6 **13.** Which of the following are right triangles? Justify your answer.

a)



b)



_____ _____

14. Circle the sets of numbers that are Pythagorean triples.

a) 10, 24, 26

b) 12, 15, 20

c) 7, 24, 26

d) 11, 60, 61

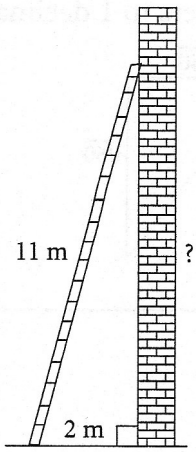
1.7 **15.** A ship travels for 14 km toward the south. It then changes direction and travels for 9 km toward the east. How far does the ship have to travel to return directly to its starting point? Answer correct to 2 decimal places.

Tip

Draw a diagram.

The ship must travel _____

16. How high up the wall does the ladder reach? Answer correct to 2 decimal places.



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