TEST NAME: **8.G.6,7,8,9 Review**
TEST ID: **1033769**
GRADE: **08 - Eighth Grade**
SUBJECT: **Mathematics**
TEST CATEGORY: **Shared Classroom Assessments**

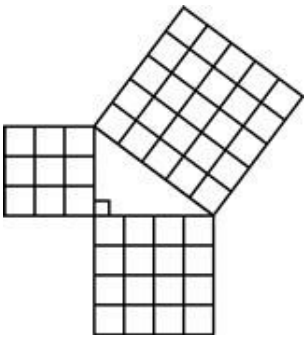
04/21/16, 8.G.6,7,8,9 Review

Student: _____

Class: _____

Date: _____

1. **A right triangle is formed by squares made up of identical square blocks as shown.**



Which statement best describes what the figure shows?

A. Three plus four equals five.

B. Three plus four equals five squared.

C. Three squared plus four squared equals five.

D. Three squared plus four squared equals five squared.

2. Which statement **best** explains how to use the side measures of a triangle to show that a triangle is a right triangle?

A. Find the sum of the squares of the lengths of the legs and see if it equals the length of the hypotenuse squared.

B. Find the square root of the length of the hypotenuse and see if it equals the sum of the lengths of the legs.

C. Find the square of the length of the hypotenuse and see if it equals the sum of the lengths of the legs.

D. Find the average of the lengths of the two legs and see if it equals the length of the hypotenuse.

3. A hot air balloon is tied to the ground by a 200-yd rope as shown in the picture below.

The balloon is floating 20 yds west of where the rope is tied to the ground. ***About*** how high in the air is the hot air balloon?

A. 180 yds

B. 199 yds

C. 201 yds

D. 220 yds

4. The length of a football field is 360 feet and the width is 160 feet. What is the ***approximate*** length of the diagonal of the football field?

A. 260 feet

B. 322 feet

C. 394 feet

D. 416 feet

5. A 90-foot wire runs from the top of a cell phone tower to the ground 63 feet from the base of the tower. ***Approximately*** how tall is the cell phone tower?

A. 27 feet

B. 64 feet

C. 77 feet

D. 110 feet

6. The width of a rectangular swimming pool is 16 ft. The diagonal of the swimming pool is 34 ft. What is the length of the swimming pool?

A. 22 ft

B. 25 ft

C. 30 ft

D. 38 ft

7. Linda bought a rectangular-shaped table.

- The top of the table has a width of 56 inches.
- The diagonal of the top of the table was 64 inches.

What is the ***approximate*** area of the top of the table?

A. 1,736 square inches

B. 1,984 square inches

C. 3,584 square inches

D. 4,762 square inches

8. Walltown is 25 miles east of Park City.

- Park City is 38 miles south of Edenton.
- Michael drove from Edenton to Park City, and then to Walltown.
- Leah drove straight from Edenton to Walltown.

About how much farther did Michael drive than Leah?

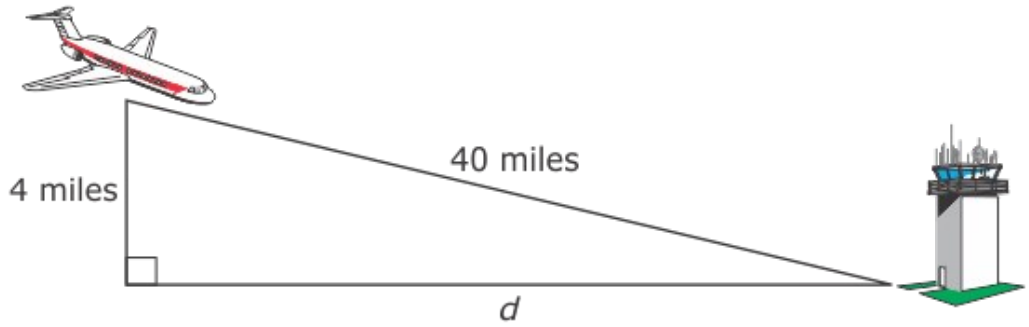
A. 17.5 miles

B. 25 miles

C. 34 miles

D. 45.5 miles

9. In the picture below, an airplane is 40 miles (air distance) from the airport and is at an elevation of 4 miles.



What is the ***approximate*** ground distance (*d*) the airplane is from the airport?

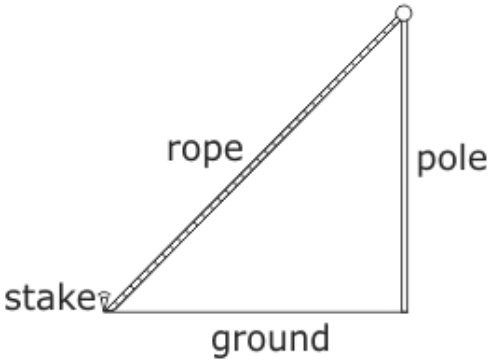
A. 20.4 mi

B. 36.0 mi

C. 39.8 mi

D. 44.0 mi

10. A rope 10 feet long is tied to the top of an 8-foot pole.



If the rope is pulled tightly, how far from the bottom of the pole should the rope be staked to the ground?

A. 2 feet

B. 6 feet

C. 9 feet

D. 13 feet

11. Which set of measurements could be the side lengths of a right triangle?

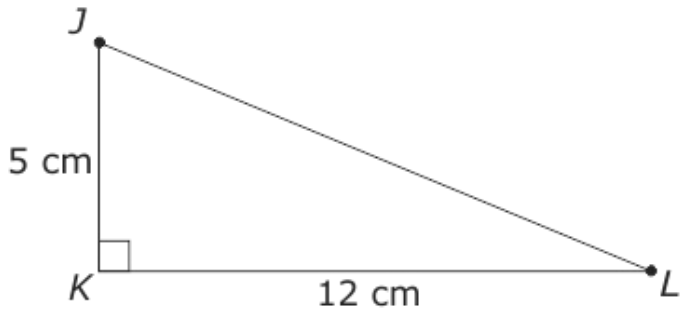
A. {10 cm, 12 cm, 16 cm}

B. {20 cm, 21 cm, 29 cm}

C. {30 cm, 32 cm, 42 cm}

D. {40 cm, 42 cm, 56 cm}

12. What is the perimeter of $\triangle JKL$ below?



A. 28 cm

B. 30 cm

C. 34 cm

D. 36 cm

13. Triangle *RST* has vertices *R*($\bar{}$1, 2), *S*(5, 0), and *T*($\bar{}$3, $\bar{}$2). What is the ***approximate*** length of line segment *ST*?

A. 8.2 units

B. 7.4 units

C. 6.3 units

D. 5.7 units

14. Square *PQRS* has the vertices *P*(−3, 3), *Q*(3, 3), *R*(3, −3), and *S*(−3, −3). What is the ***approximate*** length of diagonal *QS*?

A. 6.0 units

B. 8.5 units

C. 10.5 units

D. 12.0 units

15. Triangle *FGH* has vertices *F*(1, −5), *G*(6, 0), and *H*(1, 0). What is the ***approximate*** perimeter of this triangle?

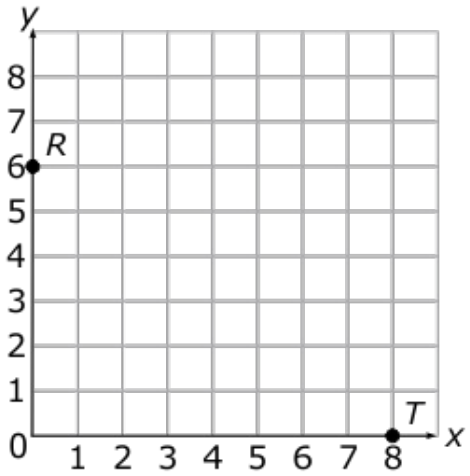
A. 13.2 units

B. 17.1 units

C. 19.3 units

D. 23.5 units

16. What is the distance between point *R* and point *T*?



A. 9 units

B. 10 units

C. 12 units

D. 14 units

17. Point R is located at ($^{-}3$, 3), and point T is located at (1, $^{-}2$). What is the ***approximate*** distance between point R and point T?

A. 5.7 units

B. 6.4 units

C. 9.0 units

D. 41.0 units

18. On a map, a city is located at (2, 9) while another city is located at ($^{-}2$, $^{-}4$). If 1 unit is equal to 10 miles, ***approximately*** how many miles apart are these two cities?

A. 6 miles

B. 12 miles

C. 136 miles

D. 550 miles

19. A company makes a cone-shaped container with a height of 15 in. The area of its base is about 78.8 in.^{2} ***Approximately*** what is the volume of the container?

A. 3,546 in.^{3}

B. 1,182 in.^{3}

C. 394 in.^{3}

D. 94 in.^{3}

20. Joel drew two cones on a piece of paper.

- The larger cone has a diameter of 8 inches and a height of 12 inches.
- The smaller cone has a radius and height equal to $\frac{1}{4}$ the size of the larger cone.

What is the ***approximate*** volume of the smaller cone?

A. 3 in.^{3}

B. 13 in.^{3}

C. 50 in.^{3}

D. 201 in.^{3}

21. An ice cream cone has a radius of 2 inches and a height of 6 inches. How much ice cream can fit inside the cone?

A. 4 in.^3

B. 6 in.^3

C. 25 in.^3

D. 101 in.^3

22. The students in a kindergarten class are filling sphere-shaped ornaments with glitter.

- There are 20 students in the class, and they are each making one ornament.
- Each ornament has a diameter of 3 inches.

About how much glitter is needed to fill all the ornaments?

A. $2{,}262 \text{ in.}^3$

B. 283 in.^3

C. 251 in.^3

D. 188 in.^3

23. Mrs. Thomas is preparing lunch for a group of students.

- A can of juice has a radius of 4 cm and height of 11 cm.
- Mrs. Thomas knows she needs at least $5{,}100 \text{ cm}^3$ of juice.

How many cans of juice will Mrs. Thomas need to buy?

A. 8

B. 9

C. 10

D. 11

24. For a science project, Angela constructed a cone to use as a mountain. The cone has a diameter of 10 in. and a height of 15 in. What is the ***approximate*** volume of the cone?

A. 150 in.^3

B. 236 in.^3

C. 393 in.^3

D. 471 in.^3

25. Mrs. Glickman is making a two-layer cake. Each layer is shaped like a cylinder.

- The bottom layer of the cake has a diameter of 12 in. and a height of 5 in.
- The top layer of the cake has a diameter of 8 in. and a height of 3 in.

What is the ***approximate*** volume of the cake?

A. 132 in.^3

B. 264 in.^3

C. 716 in.^3

D. $2{,}864 \text{ in.}^3$