Name: _____ Class: _____ Date: _____ ID: A

Review Test 2.3 Transforamtion & Pythagorean Theorem

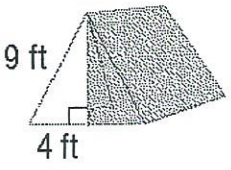
1 Estimate $\sqrt{96}$ to the nearest tenth. Then graph the square root on a number line.

Write an equation you could use to find the length of the missing side of each right triangle. Then find the missing length. Round to the nearest tenth if necessary.

2 $a = 8$ inches; $b = 6$ inches

3 $a = 4$ meters; $c = 6$ meters

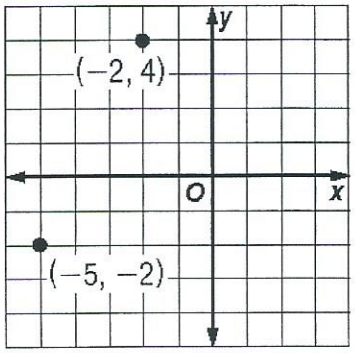
4 **CAMPING** How high is the tent at its highest point? Round to the nearest tenth if necessary.



5 **LADDER** A ladder is leaning against a house. The top of the ladder is 12 feet from the ground, and the base of the ladder is 9 feet from the side of the house. How long is the ladder? Use a diagram and round to the nearest tenth if necessary.

Find the distance between each pair of points whose coordinates are given. Round to the nearest tenth if necessary.

6



ΔXYZ has vertices $X(-4, 3)$, $Y(-1, 2)$, and $Z(-2, 0)$.

7 Find the coordinates of the vertex X' after ΔXYZ is reflected over the y-axis by drawing ΔXYZ and its image.

A (4, 3)
B (–4, –3)
C (4, –3)
D (–4, 3)

8 Find the coordinates of the vertex Y' after ΔXYZ is reflected over the x-axis by drawing ΔXYZ and its image.

F (1, 2)
G (–1, 2)
H (1, –2)
J (–1, –2)

ΔABC has vertices at $A(2, 2)$, $B(2, 5)$, and $C(5, 2)$.

9 Find the coordinates of the vertex A' after ΔABC is translated 2 units to the left and 2 units down by drawing ΔABC and its image.

A (–4, –4)
B (–2, –2)
C (0, 0)
D (–1, –1)

10 Find the coordinates of the vertex B' after ΔABC is translated 3 units left and 1 unit up by drawing ΔABC and its image.

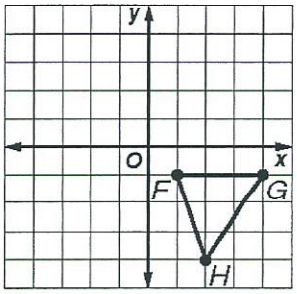
F (5, 4)
G (2, 3)
H (–1, 6)
J (–6, 5)

11 ΔPQR has vertices $P(2, 2)$, $Q(3, 2)$, and $R(3, 24)$. Find the coordinates of the vertex R' after ΔPQR is translated right 4 units and down 5 units.

A (–1, –9)
B (7, –9)
C (7, 1)
D (–2, 0)

12 ΔABC has vertices $A(1, 3)$, $B(2, –5)$, and $C(–1, 4)$. Find the coordinates of the vertex A' after ΔABC is translated right 4 units and down 5 units, then translated left 2 units and up 6 units.

Use the graph of ΔFGH below.



13 Graph the image of ΔFGH after a reflection over the x-axis.

14 Graph the image of ΔFGH after a reflection over the$y$-axis and label it $F''G''H''$.

15 Graph the image of ΔFGH after a translation 4 units left and 2 units up.

16 Graph the image of ΔFGH after a translation 3 units right and 1 unit down.

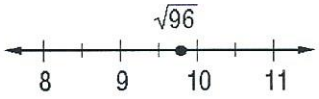
17 ΔABC has vertices $A(0, 0)$, $B(2, 5)$, and $C(-3, 5)$. Find the coordinates of the vertex A' after ΔABC is translated right 4 units and down 5 units

18 ΔABC has vertices $A(0, 0)$, $B(2, 5)$, and $C(-3, 5)$. Find the coordinates of the vertex A' after ΔABC is translated right 2 units and down 3 units.

19 ΔABC has vertices $A(1, -5)$, $B(-3, -4)$, and $C(7, 6)$. Find the coordinates of the vertex A' after ΔABC is translated right 3 units and down 5 units, then translated left 5 units and up 3 units.

Review Test 2.3 Transforamtion & Pythagorean Theorem
Answer Section

1 ANS:
9.8



PTS: 1 STA: 8.1(A)

2 ANS:
$c^2 = 8^2 + 6^2$;
10 in.

PTS: 1 STA: 8.9(A)

3 ANS:
$6^2 = 4^2 + b^2$;
4.5 m

PTS: 1 STA: 8.9(A)

4 ANS:
8.1 ft

PTS: 1 STA: 8.9(A)

5 ANS:
15 ft

PTS: 1 STA: 8.9(A)

6 ANS:
6.7 units

PTS: 1 STA: 8.9(A) | 8.7(D)

7 ANS: A PTS: 1 STA: 8.7(B)

8 ANS: J PTS: 1 STA: 8.7(B)

9 ANS: C PTS: 1 STA: 8.7(B)

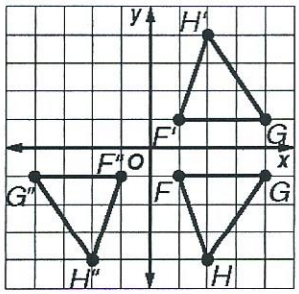
10 ANS: H PTS: 1 STA: 8.7(B)

11 ANS: B PTS: 1 STA: 8.7(B)

12 ANS:
(3, 4)

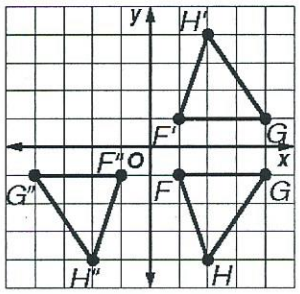
PTS: 1 STA: 8.7(B)

13 ANS:



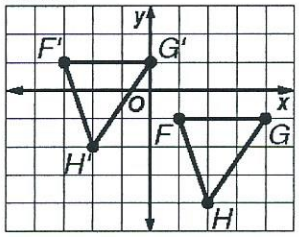
PTS: 1 STA: 8.7(B)

14 ANS:



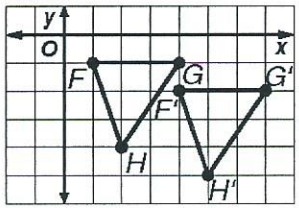
PTS: 1 STA: 8.7(B)

15 ANS:



PTS: 1 STA: 8.7(B)

16 ANS:



PTS: 1 STA: 8.7(B)

17 ANS:
(4, –5)

PTS: 1 STA: 8.7(B)

18 ANS:
(2, –3)

PTS: 1 STA: 8.7(B)

19 ANS:
$(-1, -7)$

PTS: 1 STA: 8.7(B)