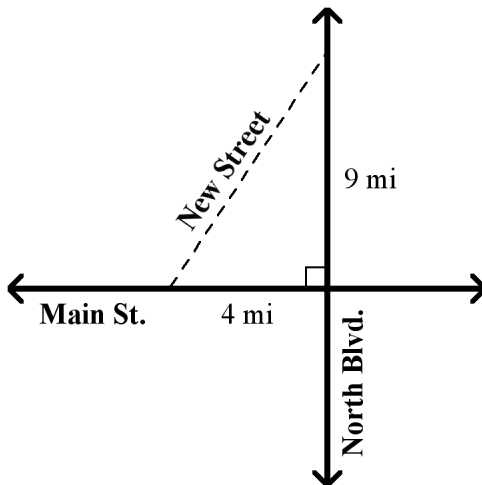


Unit 2: Pythagorean Theorem and Distance Formula Review

1. Find the length of the hypotenuse of a right triangle with legs of 20 cm and 21 cm.
2. The length of the hypotenuse of a right triangle is 15 m. The length of one leg is 9 cm. Find the length of the other leg.
3. Find the length of the right triangle's other leg. Round to the nearest tenth.
leg = 10 ft
hypotenuse = 12 ft
4. Find the length of the hypotenuse of a right triangle with legs of 18 cm and 24 cm.
5. The length of the hypotenuse of a right triangle is 30 m. The length of one leg is 24 cm. Find the length of the other leg.
6. Find the perimeter of a right triangle with legs of 20 cm and 21 cm.
- _____ 7. Which of the triangles described in the table is a right triangle?

Triangle	Side 1	Side 2	Side 3
<i>Q</i>	25	20	15
<i>R</i>	26	20	46
<i>S</i>	25	20	1,025
<i>T</i>	25	26	650

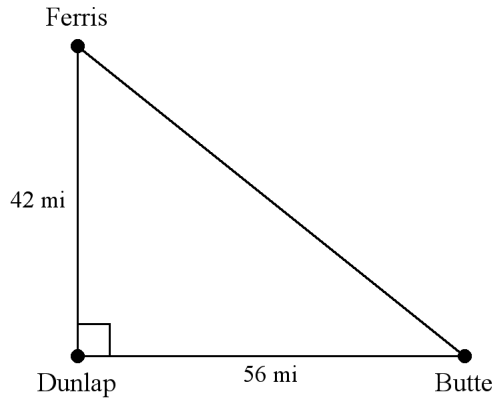
- a. *Q* b. *R* c. *S* d. *T*
8. The city commission wants to construct a new street that connects Main Street and North Boulevard as shown in the diagram below. The construction cost has been estimated at \$100 per foot. To the nearest dollar, estimate the cost for building the street.
(Hint: 1 mile = 5,280 feet).



Name: _____

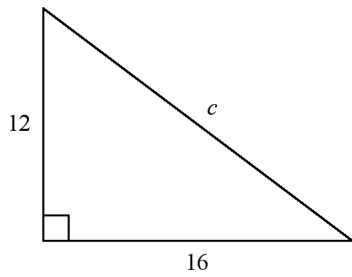
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9. Craig used the diagram to compute the distance from Ferris to Dunlap to Butte. How much shorter is the distance directly from Ferris to Butte than the distance Craig found?

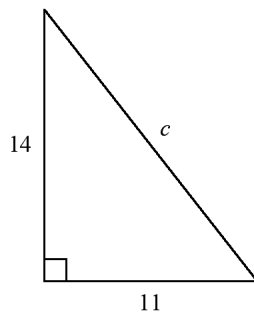


What is the length of the hypotenuse of the right triangle shown?

10.

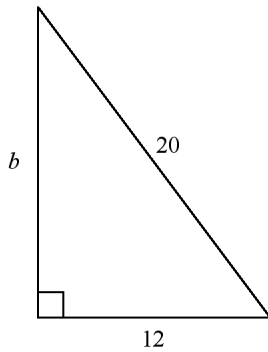


11.

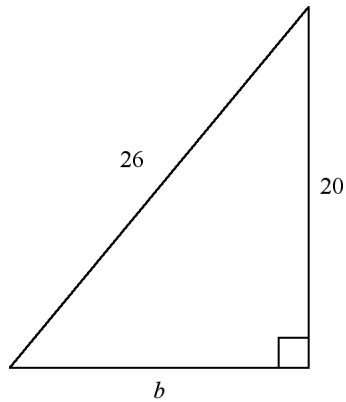


What is the side length b in the triangle below?

12.



13.



Identify the following triangles as acute, obtuse or right.

14. 18 m, 24 m, 30 m

15. 8 ft, 15 ft, 17 ft

16. 7 m, 24 m, 25 m

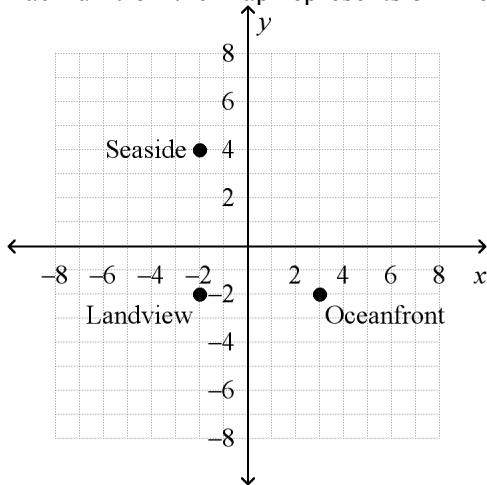
17. 7 in., 15 in., 17 in.

18. 7 ft, 40 ft, 41 ft

19. 9 m, 24 m, 25 m

20. 11 in., 12 in., 13 in.

21. 11 m, 15 m, 17 m
22. Noam walks home from school by walking 8 blocks north and then 6 blocks east. How much shorter would his walk be if there were a direct path from the school to his house? Assume that the blocks are square.
23. The Frostburg-Truth bus travels from Frostburg Mall through the city's center to Sojourner Truth Park. The mall is 3 miles east and 5 miles north of the city's center. Truth Park is 3 miles west and 4 miles south of the city's center. How far is it from Truth Park to the mall to the nearest tenth of a mile?
- _____ 24. Each unit on the map represents 5 miles. What is the actual distance from Oceanfront to Seaside?



- a. about 10 miles
b. about 50 miles
c. about 8 miles
d. about 40 miles
25. Find the distance between points $P(8, 2)$ and $Q(3, 8)$ to the nearest tenth.
26. Find the distance between points $P(7, 7)$ and $Q(9, 4)$ to the nearest tenth.
27. Find the distance between points $P(8, 8)$ and $Q(2, 4)$ to the nearest tenth.
28. Find the distance between points $P(7, 9)$ and $Q(8, 3)$ to the nearest tenth.
29. Find the distance between points $P(7, 8)$ and $Q(8, 5)$ to the nearest tenth.
30. Find the distance between points $P(1, 3)$ and $Q(7, 4)$ to the nearest tenth.