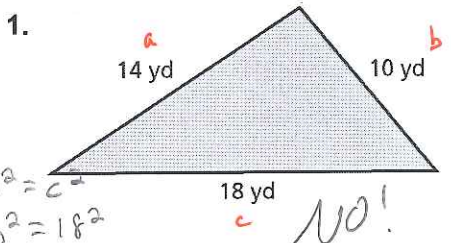


7.5

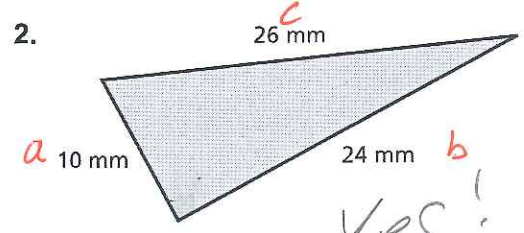
Practice
For use after Lesson 7.5

Tell whether the triangle with the given side lengths is a right triangle.



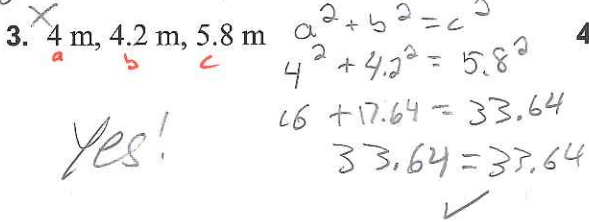
$a^2 + b^2 = c^2$
 $14^2 + 10^2 = 18^2$
 $196 + 100 = 324$
 $296 = 324$
~~X~~

NO!
Yes!



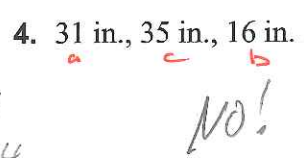
$a^2 + b^2 = c^2$
 $10^2 + 24^2 = 26^2$
 $100 + 576 = 676$
 $676 = 676$
 ✓

Yes!



$a^2 + b^2 = c^2$
 $4^2 + 4.2^2 = 5.8^2$
 $16 + 17.64 = 33.64$
 $33.64 = 33.64$
 ✓

Yes!



$a^2 + b^2 \neq c^2$
 $31^2 + 16^2 = 35^2$
 $961 + 256 = 1225$
 $1217 \neq 1225$
 X

NO!

Find the distance between the two points.

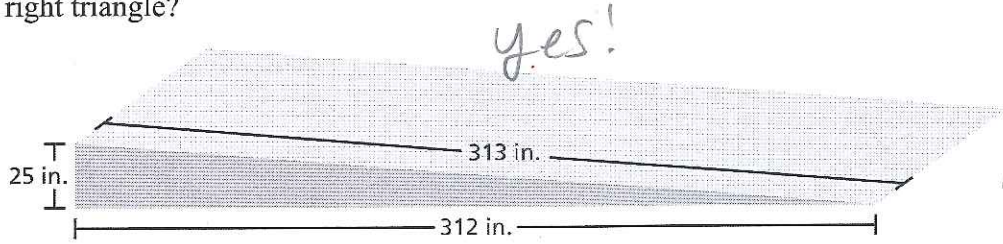
5. (2, 1), (-3, 6)
 $d = \sqrt{(-3-2)^2 + (6-1)^2}$
 $d = \sqrt{(-5)^2 + (5)^2}$
 $d = \sqrt{25 + 25}$
 $d = \sqrt{50}$

6. (-6, -4), (2, 2)
 $d = \sqrt{(2-(-6))^2 + (2-(-4))^2}$
 $d = \sqrt{8^2 + 6^2}$
 $d = \sqrt{64 + 36}$
 $d = \sqrt{100}$
 $d = 10$

7. (1, -7), (4, -5)
 $d = \sqrt{(4-1)^2 + (-5-(-7))^2}$
 $d = \sqrt{3^2 + 2^2}$
 $d = \sqrt{9 + 4}$
 $d = \sqrt{13}$

8. (-9, 3), (-5, -8)
 $d = \sqrt{(-5-(-9))^2 + (-8-3)^2}$
 $d = \sqrt{(4)^2 + (-11)^2}$
 $d = \sqrt{16 + 121}$
 $d = \sqrt{137}$

9. The cross-section of a wheelchair ramp is shown. Does the ramp form a right triangle?



$a^2 + b^2 = c^2$
 $25^2 + 312^2 = 313^2$
 $625 + 97,344 = 97,969$
 $97,969 = 97,969$
 ✓