Lesson 1

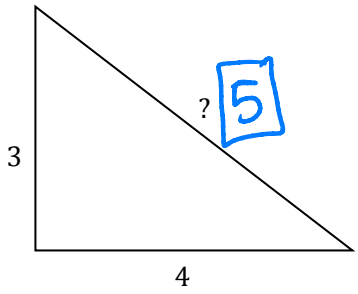
READY, SET, GO! Name Key Period Date

READY

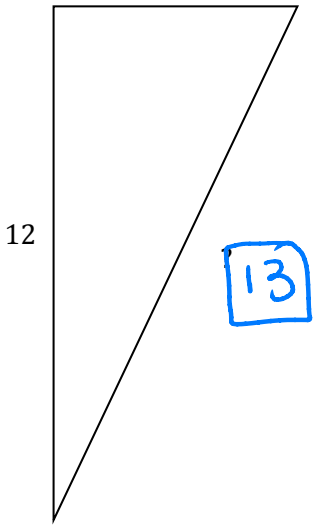
Topic: Pythagorean Theorem

For each of the following right triangles determine the measure of the missing side. Leave the measures in exact form if irrational.

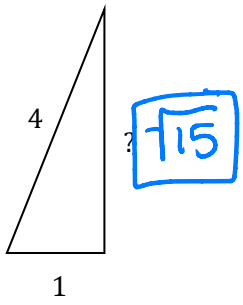
1. Pythagorean Triple



2. Pythagorean Triple



3.



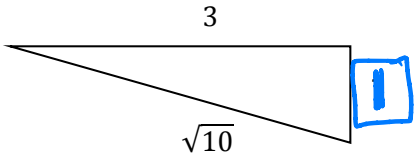
$1^2 + x^2 = 4^2$

$x^2 = 16 - 1$

$x^2 = 15$

$x = \sqrt{15}$

4.



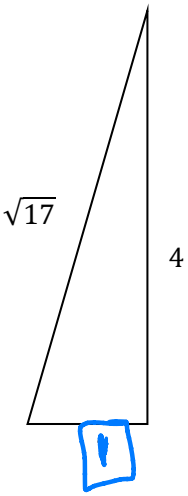
$3^2 + x^2 = (\sqrt{10})^2$

$x^2 = 10 - 9$

$\sqrt{x^2} = \sqrt{1}$

$x = 1$

5.



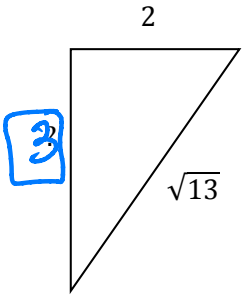
$4^2 + x^2 = (\sqrt{17})^2$

$x^2 = 17 - 16$

$\sqrt{x^2} = \sqrt{1}$

$x = 1$

6.



$2^2 + x^2 = (\sqrt{13})^2$

$x^2 = 13 - 4$

$\sqrt{x^2} = \sqrt{9}$

$x = 3$

Lesson 1

SET

Topic: Transformations.

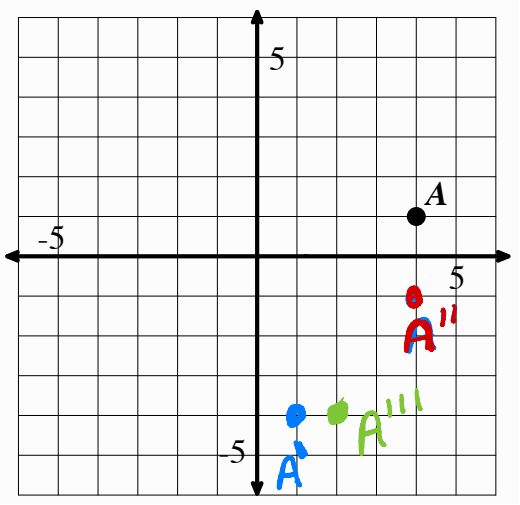
Transform points as indicated in each exercise below.

7a. Rotate point A around the origin 90° clockwise, label as A'

b. Reflect point A over x-axis, label as A''

c. Apply the rule $(x - 2, y - 5)$, to point A and label A'''

shift left 2
down 5

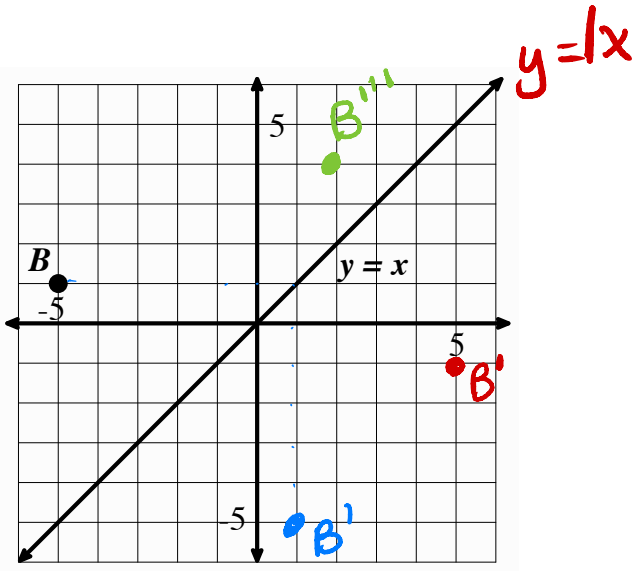


8a. Reflect point B over the line $y = x$, label as B'

b. Rotate point B 180° about the origin, label as B''

c. Translate point B the point up 3 and right 7 units, label as B'''

$(x+7, y+3)$



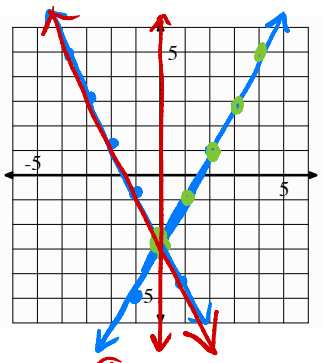
Lesson 1

GO

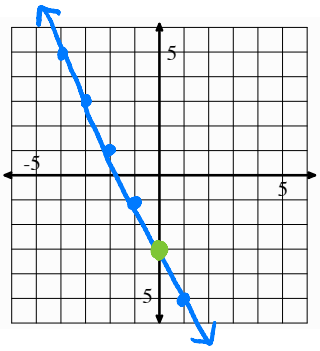
Topic: Graphing linear equations.

Graph each function on the coordinate grid provided. Extend the line as far as the grid will allow.

9. $f(x) = 2x - 3$



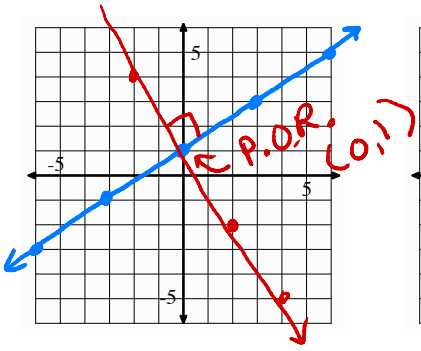
10. $g(x) = -2x - 3$



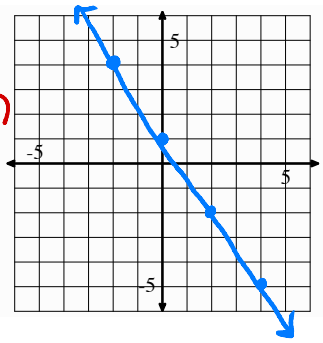
11. What similarities and differences are there between the functions *f(x)* and *g(x)*?

- same y-intercept
- opposite slopes
- lines are reflect over the y-axis

12. $h(x) = \frac{2}{3}x + 1$



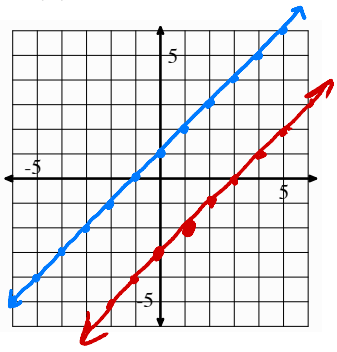
13. $k(x) = -\frac{3}{2}x + 1$



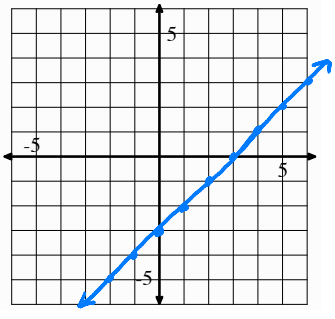
14. What similarities and differences are there between the equations *h(x)* and *k(x)*?

- same y-intercepts
- Slopes are opposite reciprocals (perpendicular) (Rotate 90°

15. $a(x) = x + 1$



16. $b(x) = x - 3$



17. What similarities and differences are there between the equations *a(x)* and *b(x)*?

- same slopes
- different y-intercepts
- lines are translated