

Arithmetic & Geometric Sequences – Write an equation representing the information in each table.

24.

x	0	1	2	3	4	5
y	-4	-8	-16	-32	-64	-128

25.

x	0	1	2	3	4	5
y	5	12	19	26	33	40

26.

x	-2	-1	0	1	2	3
y	24	19	14	9	4	-1

27.

x	2	3	4	5	6	7
y	8	9	10	11	12	13

28.

x	1	2	3	4	5	6
y	5	15	45	135	405	1215

29

x	-2	-1	0	1	2	3
y	10	5	$\frac{5}{2}$	$\frac{5}{4}$	$\frac{5}{8}$	$\frac{5}{16}$

15.

x	0	1	2	3	4	5
y	-4	-8	-12	-16	-20	-24

16.

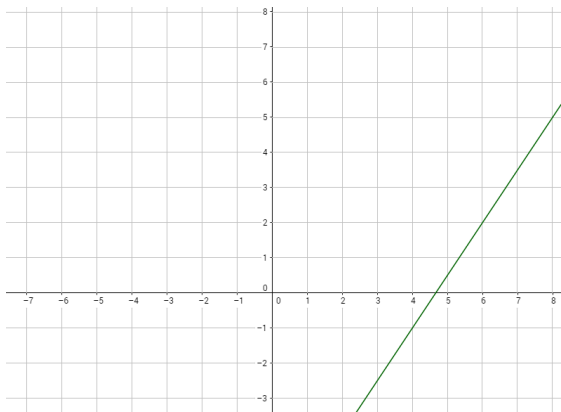
x	0	1	2	3	4	5
y	48	24	12	6	3	1.5

17.

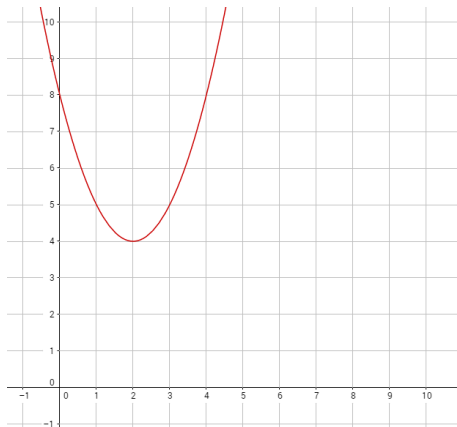
x	-2	-1	0	1	2	3
y	78	80	82	84	86	88

Graph the inverse of each function.

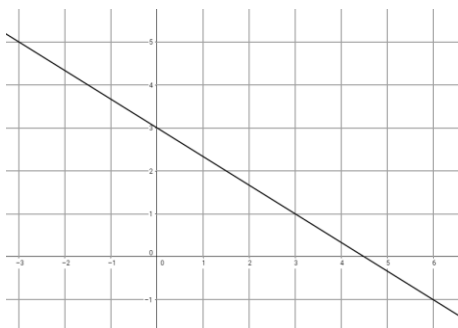
33.



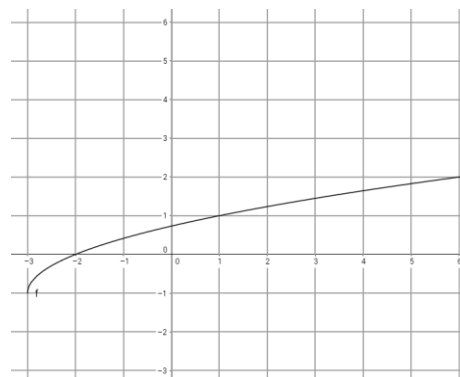
34.



18.



19.



Determine the inverse of each function.

30. $f(x) = \frac{3}{2}x - 7$

31. $g(x) = \sqrt{x + 5}$

32. $h(x) = (x - 2)^2 + 9$

9. $f(x) = -\frac{1}{4}x + 3$

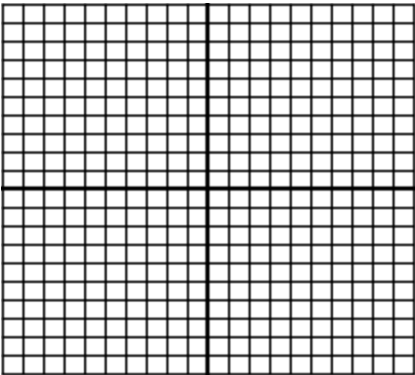
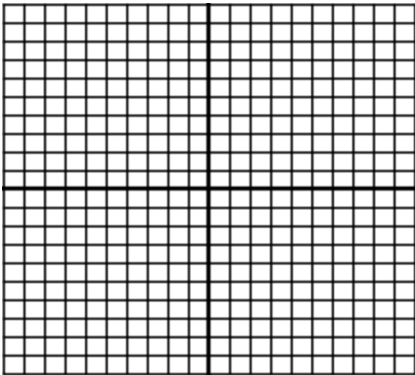
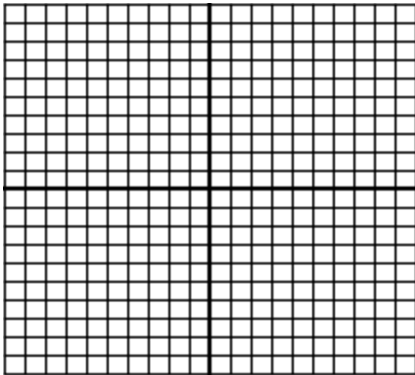
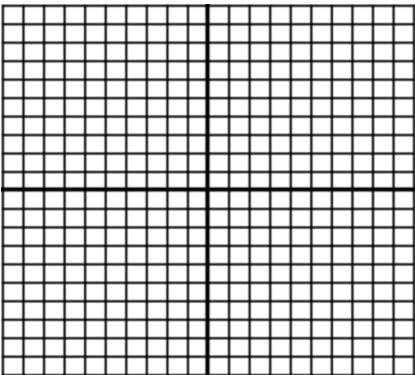
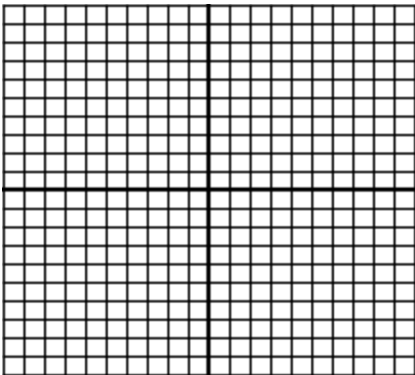
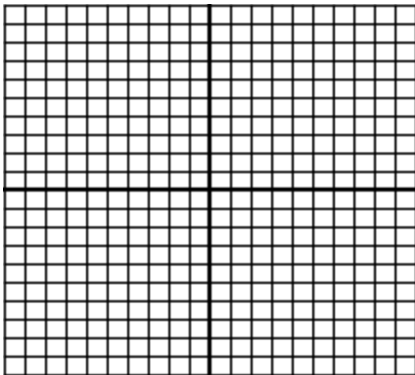
10. $g(x) = \sqrt{2x - 1}$

11. $h(x) = (x + 11)^2 + 5$

Solve Literal Equation with a common variable in two terms.

4. Solve $y = mx + b$ for x .	5. Solve $A = \frac{1}{2}bh$ for h .	6. Solve $Ax + By = C$ for A .
7. Solve $Fm + Fb = a$ for F .	8. Solve $\pi r^2 + 2\pi rh = A$ for π .	9. Solve $pb - yps = br$ for p .
10. Solve $sr + tr = u$ for r .		
11. Solve $y = mx + b$ for b .	12. Solve $y = mx + b$ for m .	13. Solve $Ax + By = C$ for y .

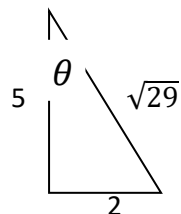
Transformations

1. $y = x $ 	2. $f(x) = (x)^2$ 	3. $y = (x + 2)^2 - 3$ 
1. $y = - x + 3 $ 	1. $f(x) = 2 x - 7$ 	1. $y = 2(x + 6)^2$ 

Right Triangle Trigonometry

Assume the triangle is a right triangle.

Here is an example:



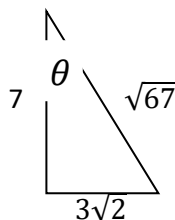
$$\sin\theta = \frac{2}{\sqrt{29}}$$

$$\cos\theta = \frac{5}{\sqrt{29}}$$

$$\tan\theta = \frac{2}{5}$$

* Write all three trigonometric equations for each triangle using SOH-CAH-TOA. Assume a right triangle.

1.



$$\sin\theta =$$

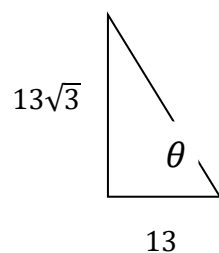
$$\cos\theta =$$

$$\tan\theta =$$

Also use the Pythagorean Theorem to verify the side lengths of this right triangle.

* Write all three trigonometric equations for each triangle using SOH-CAH-TOA. Assume all triangles are right triangles.

2.



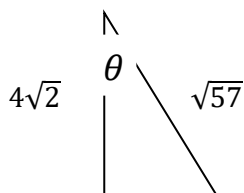
$$\sin\theta =$$

$$\cos\theta =$$

$$\tan\theta =$$

* Write all three trigonometric equations for each triangle using SOH-CAH-TOA. Assume all triangles are right triangles.

3.



$$\sin\theta =$$

$$\cos\theta =$$

$$\tan\theta =$$

* Solve each equation. Check/verify your answers.

a. $\frac{2}{3}x - 7 = 6$

b. $-\frac{x}{3} - 1 = 21$

c. $\frac{3}{4}(2x - 9) = \frac{1}{4}x + \frac{3}{4}$

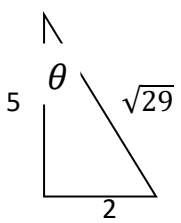
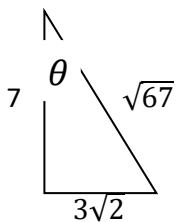
d. $\frac{1}{2}(x - 7) = \frac{3}{5}x + \frac{5}{2}$

Algebra 2 - Basic Skills Quiz Practice

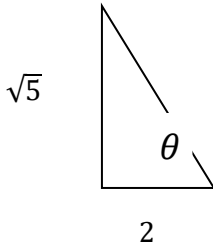
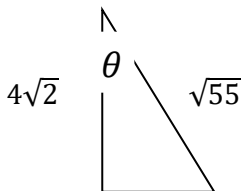
Name _____ Period _____

Beginning this week, the Right Triangle Trigonometry section of your Skills Quizzes may require an extra step.

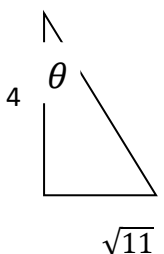
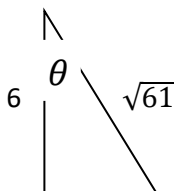
So far, your questions have looked like this...Take some time to practice these.

* Write all three trigonometric equations for each triangle using SOH-CAH-TOA. Assume a right triangle.  $\sin \theta = \frac{2}{\sqrt{29}}$ $\cos \theta = \frac{5}{\sqrt{29}}$ $\tan \theta = \frac{2}{5}$	* Write all three trigonometric equations for each triangle using SOH-CAH-TOA. Assume a right triangle. 1.  $\sin \theta =$ $\cos \theta =$ $\tan \theta =$
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As of this week, these questions may now look like this....Do you see what is missing? One side is missing, and you now need to use the Pythagorean Theorem to find the missing side. Here are a couple of examples.

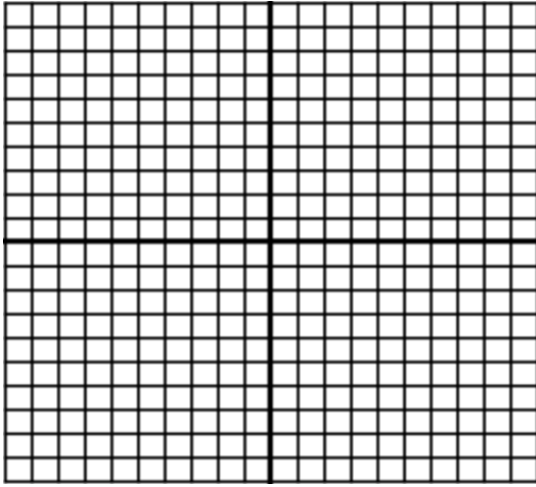
* Write all three trigonometric equations for each triangle using SOH-CAH-TOA.  $\sin \theta =$ $\cos \theta =$ $\tan \theta =$ $a^2 + b^2 = c^2$ $(\sqrt{5})^2 + (2)^2 = c^2$ $5 + 4 = c^2$ $9 = c^2$ $3 = c$ Now that you have the hypotenuse, you can fill in the boxes for all three trigonometric equations.	* Write all three trigonometric equations for each triangle using SOH-CAH-TOA.  $\sin \theta =$ $\cos \theta =$ $\tan \theta =$ $a^2 + b^2 = c^2$ $(4\sqrt{2})^2 + b^2 = (\sqrt{55})^2$ $16 \cdot 2 + b^2 = 55$ $32 + b^2 = 55$ $b^2 = 23$ $b = \sqrt{23}$ Now that you have the missing leg, you can fill in the boxes for all three trigonometric equations.
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Practice

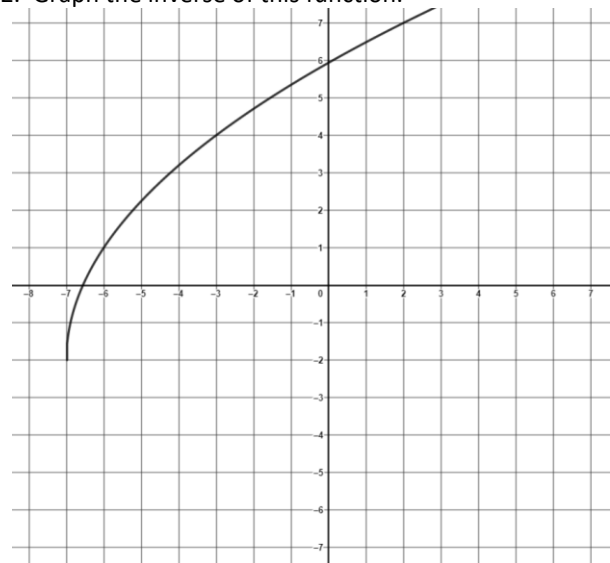
* Write all three trigonometric equations for each triangle using SOH-CAH-TOA. Assume a right triangle.  $\sin \theta =$ $\cos \theta =$ $\tan \theta =$	* Write all three trigonometric equations for each triangle using SOH-CAH-TOA. Assume a right triangle. 1.  $\sin \theta =$ $\cos \theta =$ $\tan \theta =$
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Calculators are NOT allowed on these quizzes.

1. Accurately graph
- $y = -x^2 - 3$



2. Graph the inverse of this function.

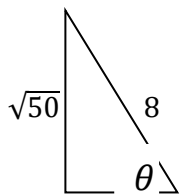


3. Write an equation representing the information in the table.

x	1	2	3	4	5
y	9	18	36	72	144

4. Solve
- $v = \frac{2\pi r}{T}$
- for
- T
- .

5. Write all three trigonometric equations for each triangle using SOH-CAH-TOA. Assume a right triangle.



$$\sin \theta =$$

$$\cos \theta =$$

$$\tan \theta =$$

6. Solve the equation
- $\frac{3}{5}x + \frac{7}{10} = 4x - 3$
- for
- x
- .

7. Write an equation representing the information in the table.

x	-2	-1	0	1	2
y	-15	-21	-27	-33	-39

8. Determine the equation of the inverse of the given function. Finalize your answer by solving for
- y
- .

$$f(x) = 3\sqrt{x+1}$$