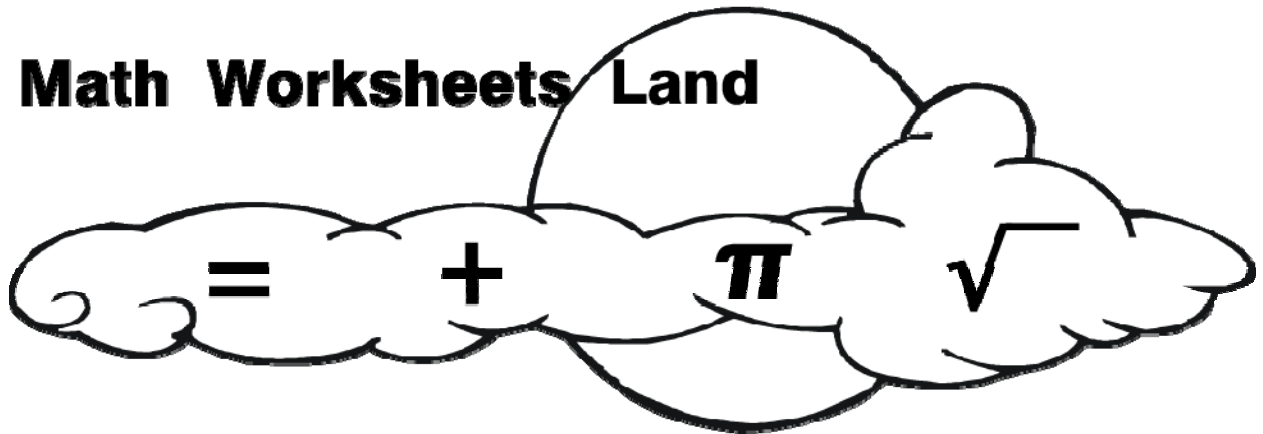


High School Functions Core Curriculum Math Test

Math Common Core Sampler Test

Math Worksheets Land



Our High School Functions sampler covers the twenty most common questions that we see targeted for this level. For complete tests and break downs of each section, please check out web site listed below.

High School Functions Common Core Math Tests:

<http://www.mathworksheetsland.com/tests/hsfunctions.html>

For Full Worksheets, Quizzes, and Homework Samples:

<http://www.mathworksheetsland.com/functions/>

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Q1. Is the given relation a function?

Domain	Range
12	1
1	12
8	7
7	8

Q2. What is the value of $f(3)$ where

$$f(x) = x^2 + 3^x$$

Q3. Complete the following table:

$f(x) = x^2 - 6x$	
-3	
-1	
2	
5	
7	



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Q4. The formula for the nth term of an arithmetic series is:

$$a_n = a_1 + (n-1)d$$

Where a_n is the nth term, a_1 is the first term, d is the difference between consecutive numbers and n is the number of term.

Find the 16th term in the series

2.5, 4, 5.5, 7, 8.5.....

Q5. Complete the ordered pair and tell whether it is a function.

$$y = 3x - 1$$

$\{(-1, \quad), (0, \quad), (\quad, 5), (3, \quad)\}$

Q6. State whether the given function is even, odd or neither.

$$f(x) = 2x^3 + x^2 - 2$$

Q7. Sara invests \$2,000 at 10% interest rate per year for two years. Then after two years, she invested the total amount at 12% interest rate compounded semi-yearly. Find the total amount after 6 years.



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Q8. Graph the function using intercepts

$$y = 2x - 6$$

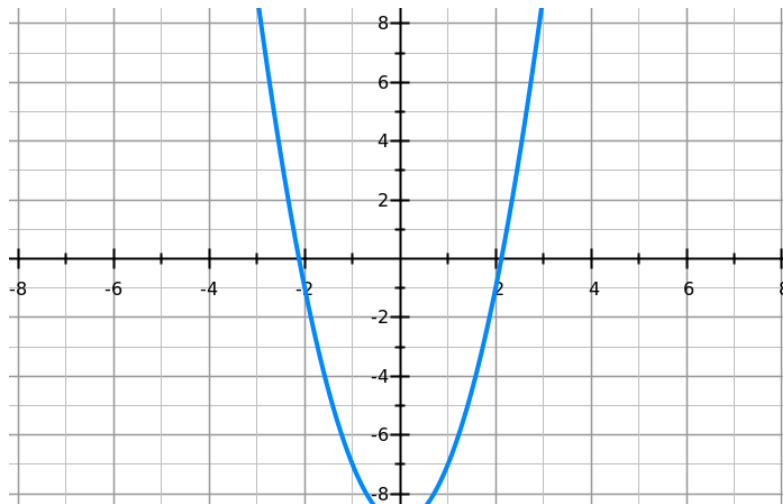
Q9. Sketch the graph of

$$2x^2 - 7x + 1$$

Q10. Sketch the graph

$$f(x) = 3^{2x} - 4^{-x} - 1$$

Q11. What type of function does the following graph show?



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Q12. Write a linear, quadratic or exponential equation for the given data.

X	Y
-3	0.5
-2	1
-1	2
0	4
1	8
2	16

Q13. Let $\sec \theta = 2$.**Find the given trigonometric ratios using unit circle** $\cot \theta, \operatorname{cosec} \theta, \cos \theta.$

Q14. Find exact value of

$$\cot(-\pi/4)$$

Q15. What is the amplitude of the following function?

$$f(x) = \frac{5 \tan 2x}{3}$$



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Q16. Show the following as a single trigonometric function

$$\frac{\sin 3x}{\cos x} + \frac{\cos 3x}{\sin x}$$

Q17. If $\sin \theta = 4/5$ and terminal ray is in the 2nd Quadrant, find

i. $\cos \theta$

ii. $\cot \theta$

Q18. Complete the table when $f(x) = \cot x$

x	0	30	60	90	120	150	180
f(x)							



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Q19. Find the inverse of following function

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

Q20. The two function are defined as

$$v(x) = \frac{2x}{3} + 1 \text{ and } u(x) = 3x - \frac{3}{2}$$

Find $v(u(2))$

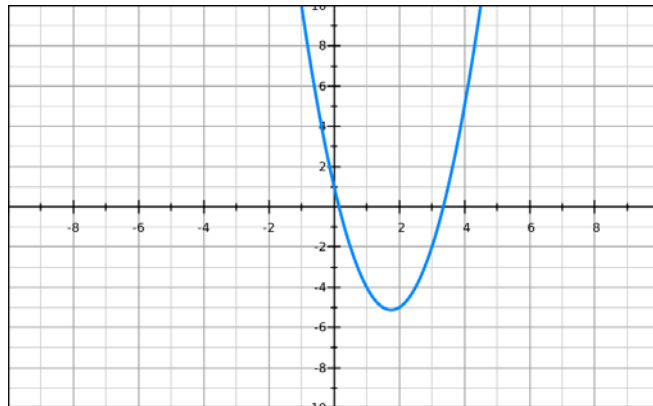


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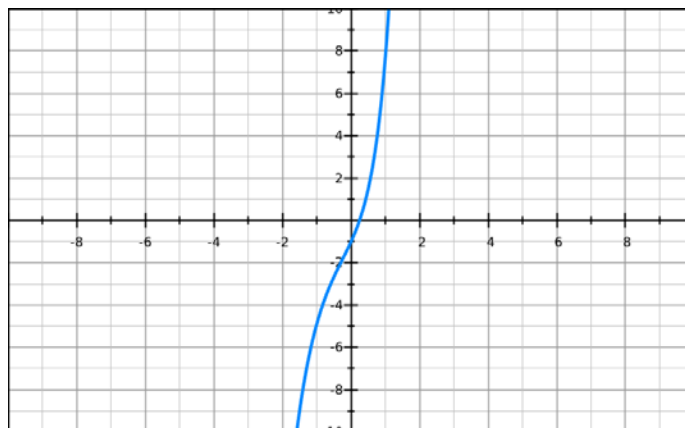
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Answers Keys

1. Yes
2. 36
3. 27, 7, -8, -5, 7
4. 25
5. -4, -1, 2, 8
6. Neither
7. 3857.11\$
8. $X=3$ and $y=-6$
- 9.



10.



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11. $2x^2-9$

12. $4(2)^x$

13. $\cot\theta = \frac{1}{\sqrt{3}}, \operatorname{cosec}\theta = \frac{2}{\sqrt{3}}, \cos\theta = \frac{1}{2}$

14. -1

15. $\frac{5}{3}$

16. $2\cot 2x$

17. $\cos\theta = -\frac{3}{5}, \cot\theta = -\frac{3}{4}$

18. $\infty, \sqrt{3}, \frac{1}{\sqrt{3}}, 0, -\frac{1}{\sqrt{3}}, -\sqrt{3}, \infty$

19. $\frac{2}{3-x}$

20. 4

