Grade 8 Core Curriculum Math Test
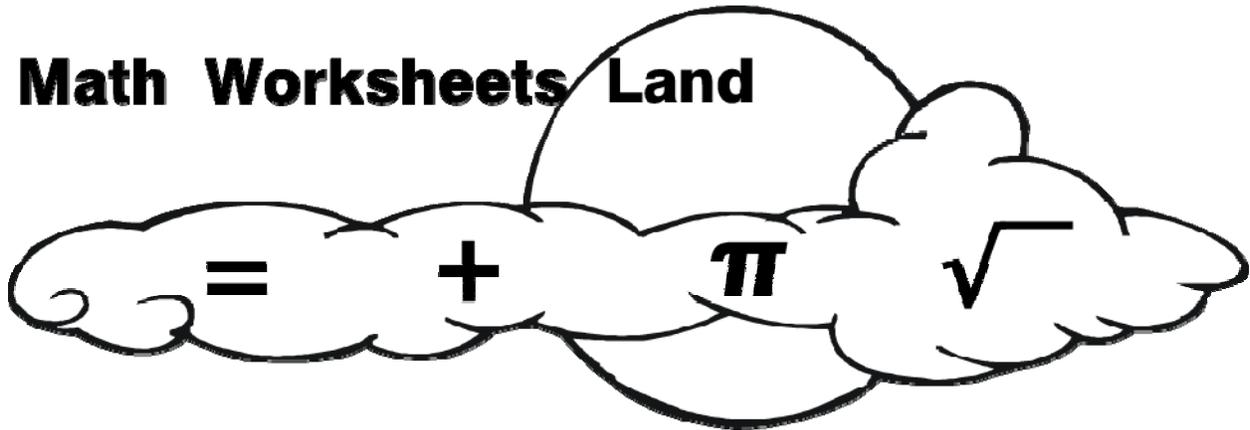
Math Common Core Sampler Test

Our grade 8 sampler covers the twenty most common questions that we see targeted for this level in multiple choice format. For complete tests and break downs of each section, please check out web site listed below.
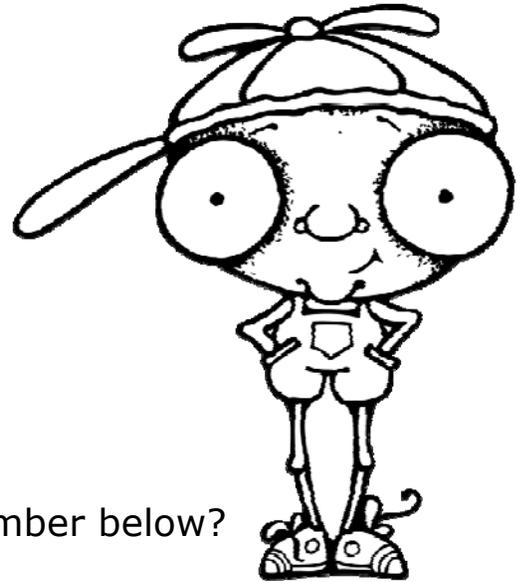
Grade 8 Common Core Math Tests:

http://www.mathworksheetsland.com/tests/grade8.html

For Full Worksheets, Quizzes, and Homework Samples:

http://www.mathworksheetsland.com/8/

1. Write 0.64 as a fraction in reduced form.

A)   16/25   B)   64/100

C)   32/50   D)   1/64

2. Which of the following is an irrational number below?

A)   787   B)   13/17

C)   4.5102   D)   √620

3. Solve the system of two equations:

   $2y = 8$ and $15y = 2x - 4$

A)   x= 4, y=32   B)   x=32, y= 4

C)   x=30, y =4   D)   x= 4, y=4

4. A line has a slope of 6 and a y-intercept of -10. What is its equation in slope-intercept form?

A)   y= 6x+10   B)   6y = x-10

C)   y = 6x-10   D)   y= x-10

5. Find the point of intersection of the two lines

y = 3x+2 and y = 2x- 1

A)   (7,3)   B)   (-3,7)

C)   (3, -7)   D)   (-3,-7)

6. Find the value of: 2^4 x 4^{-2}

A)   1   B)   2

C)   0   D)   1/2

7. A square park has an area of 6561 square meters. If you walk around the park, what is the distance that you would have walked?

 A)   81 m   B)   324 m

C)   1296 m   D)   162 m

8. Write the number 0.00000123 in scientific notation.

A)   123   B)   123x 10^6

C)   1.23 x 10^6 D)   1.23 x 10^{-6}

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9. Write the following in standard form: 2.25×10^5
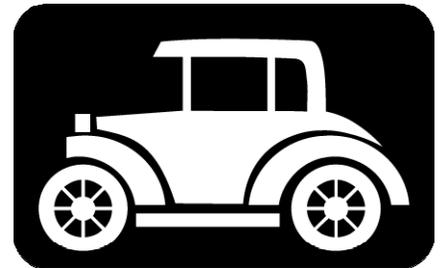
A)   22500   B)   225000

C)   22500000   D)   2.25000

10. Solve for x, if $x^4 - 25 = 600$

A)   5   B)   25

C)   625   D)   125

11. What is the value of function: $f(x) = 10x + 2$ when x = 5?

A)   5   B)   50

C)   52   D)   60

12. Which of functions below is non-linear?

A) $y = 2x^2 + 3x + 1$ B) $y = 3x - 1$

C) $y = 2x + 5$ D) $y = 4 (x-3)$

13. How much time will an old car take to cover a distance of 39 miles at a speed of 13 miles/hour? Express distance as a function of time.

A)   3 hr, y =13x   B)   3 hr, y =3x

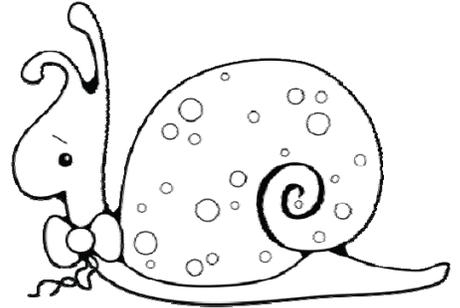C)   13 hr, y=39x   D)   3 hr, x= 13y

14. Which ordered pair would fit the function: y = 3x -2

A)   0, 2   B)   1, -1
C)   2, 4   D)   -1, 1

15. A line has unit slope and passes through point origin (0, 0). What is the equation of the line?

A)   y = 0   B)   x = 0

C)   y = -x   D)   y = x

16. A boat starts from a port and moves 12 miles north and then moves 5 miles east. What is the present distance of the boat from the port?

A)   17 miles   B)   7 miles

C)   13 miles   D)   15 miles

17. Find the distance between point A (5, 3) and point B (1,0) on a graph using the Pythagorean Theorem.

A)   5   B)   25

C)   6   D)   4

18. Which of the following is the formula for the volume of a cylinder?

A) $2\prod r$ B) $2\prod rh$

C) $2\prod r^2 h$ D) $\prod r^2 h$

19. Find the volume of a ball with a radius of 7 cm.

A)   1437 cubic cm   B)   714 cubic cm

C)   359 cubic cm   D)   205 cubic cm

20. What volume of ice cream is contained in a 10 cm-high ice cream cone with a base radius of 4 cm?

A) 670 cubic cm   B) 335 cubic cm

C) 268 cubic cm   D) 168 cubic cm

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Bubble Sheet for Grade 8 Test Sampler

1. ⓐ ⓑ ⓒ ⓓ   12. ⓐ ⓑ ⓒ ⓓ

2. ⓐ ⓑ ⓒ ⓓ   13. ⓐ ⓑ ⓒ ⓓ

3. ⓐ ⓑ ⓒ ⓓ   14. ⓐ ⓑ ⓒ ⓓ

4. ⓐ ⓑ ⓒ ⓓ   15. ⓐ ⓑ ⓒ ⓓ

5. ⓐ ⓑ ⓒ ⓓ   16. ⓐ ⓑ ⓒ ⓓ

6. ⓐ ⓑ ⓒ ⓓ   17. ⓐ ⓑ ⓒ ⓓ

7. ⓐ ⓑ ⓒ ⓓ   18. ⓐ ⓑ ⓒ ⓓ

8. ⓐ ⓑ ⓒ ⓓ   19. ⓐ ⓑ ⓒ ⓓ

9. ⓐ ⓑ ⓒ ⓓ   20. ⓐ ⓑ ⓒ ⓓ

10. ⓐ ⓑ ⓒ ⓓ

11. ⓐ ⓑ ⓒ ⓓ

Answer Key for Grade 8 Test Sampler

1. ● ⓑ ⓒ ⓓ

2. ⓐ ⓑ ⓒ ●

3. ⓐ ● ⓒ ⓓ

4. ⓐ ⓑ ● ⓓ

5. ⓐ ⓑ ⓒ ●

6. ● ⓑ ⓒ ⓓ

7. ⓐ ● ⓒ ⓓ

8. ⓐ ⓑ ⓒ ●

9. ⓐ ● ⓒ ⓓ

10. ● ⓑ ⓒ ⓓ

11. ⓐ ⓑ ● ⓓ

12. ● ⓑ ⓒ ⓓ

13. ● ⓑ ⓒ ⓓ

14. ⓐ ⓑ ● ⓓ

15. ⓐ ⓑ ⓒ ●

16. ⓐ ⓑ ● ⓓ

17. ● ⓑ ⓒ ⓓ

18. ⓐ ⓑ ⓒ ●

19. ● ⓑ ⓒ ⓓ

20. ⓐ ⓑ ⓒ ●

Detailed Answer Key for Grade 8 Test Sampler

1. Ans.   A)   16/25

   0.64 = 64/100 = 16/25

2. Ans.   D)   √620

3. Ans.   B)   x =32 and y = 4

From the first equation you get y= 4. Now put this value of y in second equation.

   60 = 2x -4 or 2x= 64 or x = 32. Hence x =32 and y = 4

4. Ans.   C)   y = 6x-10

The slope-intercept form of a linear equation is y = mx + B); where m = slope and B) = y- intercept. Hence the equation of the line is y = 6x-10

5.   Ans. D)   The point (-3, -7) is the coordinates of the point of intersection of the two lines.

6. Ans.   A)1

   $2^4 \times 4^{-2} = 2^4 \times (2^2)^{-2} = 2^4 \times 2^{-4} = 2^{4-4} = 2^0 = 1$

7. Ans.   B)   324 m

The length of one side of the park = $\sqrt{6561}$ = 81.

Perimeter = 81 x 4 = 324 meters

8.   Ans. D) 1.23×10^{-6}

9.   Ans.   B)   225000

10.   Ans.   A) 5

   $x^4 - 25 = 600$ or $x^4 = 625$ or $x^4 = 5^4$ or $x = 5$

11.   Ans.   C)   52

12.   Ans.   A) $y = 2x^2 + 3x + 1$

13.   Ans. A)   3 hours,   y = 13x

Distance y can be written as a function of time x as y = 13x

14.   Ans.C)   2,4

15.   Ans.   D)   y =x

16. Ans.   C)   13 miles

  The distance is calculated by using the Pythagorean Theorem. distance $=\sqrt{(12^2+5^2)}$ = 13 miles

17. Ans. A)   5

  The distance between two points with the coordinates (x1, y1) and (x2, y2)

$$D = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} = 5$$

18. Ans. D) $\prod r^2 h$

19. Ans. A) 1437 cubic cm

  $4/3 \prod r^3$ = 1436 cube cm(approx)

20. Ans.   D)   168 cubic cm

The volume of ice cream = $1/3 \prod r^2 h$

=1/3 x 22/7 x 16 x10 = 168 cubic cm