Rising 8th grade
Summer Assignment

Welcome to 8th grade at Flat Rock Middle School! We hope that you have had a wonderful summer. Since it would be in your best interest to review some mathematics this summer in preparation for this challenging and fun class, we're providing you with some review problems for you to complete this summer. These are concepts that were covered in your 7th grade math class. Little time will be spent reviewing this material. **The 8th grade teachers will collect these problems during the first week of school.** If you need a refresher on any topics, we recommend visiting www.khanacademy.org.

Please remember that you can also log into Study Island to view and practice the 8th grade standards. If you click on the blue lesson tab, you will find notes on how to complete the lessons. You will have to complete the pretest before you can unlock the other topics.

Study Island Log In Information (it will not change from your 7th grade year)
Username: Firstname.Lastname.FRMS
Password: Your Student Id #

IXL, Dreambox, Moby Max, USAtestprep will all be accessible to you. Try to spend one POWER HOUR each day strengthening your academic potential. Start your 8th year off on the right track by staying sharp this summer! We look forward to seeing you in August.

Sincerely,

The 8th Grade Math Team
Mrs. Robin Clark, Mrs. Laurie Townsend, and Mrs. D. Monique Williams.

P.S. If you have any questions, please feel free to email us at clark.robin@mail.fcboe.org, townsend.laurie@mail.fcboe.org, williams.monique@mail.fcboe.org.

Order of Operations

1. $8 + 7 \cdot 9$

2. $12 + 4^2$

3. $35 - (17 - 2) \div 5$

4. $24 - 9 \cdot 2 + 6 \div 3$

5. $\frac{90 - 22}{28 - 11}$

6. $\frac{45}{9} + 3$

7. $12(2 + 7) - 24 \div 12$

8. $4(9 - 3) \div (8 - 2)$

9. $26 - [(25 - 11) - 2^3]$

10. $(8^2 - 2^5) \div (24 \div 6) + 3^2$

11. $\frac{12(30-12)}{3^2}$

12. $\frac{5(16-5)-1}{4^2-7}$

Substitute and evaluate: $x = 8$, $y = 6$, $m = 3$, $p = \frac{1}{2}$, $n = \frac{3}{4}$

13. $4x - 2m$

14. $5y + 8p$

15. $nxy \div m$

16. $2(3x + 6) \div (10m)$

17. $2ny + x$

18. $(x + y) \div p$

19. $6p + 8n$

20. $my - 2x$

Integers Operations

1. $8 + (-5) =$
2. $-5 + (-4) =$
3. $14 + 7 + (-4) =$
4. $-6 - 8 =$
5. $13 + (-25) =$
6. $-9 + (-4) + (-3) =$
7. $15 + (-3) =$
8. $-4 + 4 =$
9. $-6 + 10 + (-8) =$
10. $7 - (-8) =$
11. $-10 + (-10) =$
12. $23 + (-6) + 2 =$
13. $14 - 17 =$
14. $9x - (-4x) + 3x =$
15. $4 + (-7) + (-8) =$
16. $3x + 12x =$
17. $-11x + (-9x) =$
18. $-12x + (-4x) + (-5x) =$
19. $(-3) + (-3) =$
20. $5x + 8x + (-5x) =$
21. $-8 - 7 - 12 =$
22. $11 + (-14) =$
23. $4a + 9a + (-13a) =$
24. $5 - 12 + 7 =$
25. $-12 + (-18) =$
26. $20x + (-9x) + 3x =$
27. $6 + (-4) - (-9) + 7 =$
28. $1 - (-5) =$
29. $6x + 12x + (-7x) =$
30. $-9 + (-5) + 14 - (-6) =$
31. $-80 \div -4 =$
32. $4 \times -15 =$
33. $(-4)(-3) =$
34. $16 - 33 =$
35. $-10 - 17 =$
36. $\frac{-60}{-10} =$
37. $-9 \times 6 =$
38. $18 + -39 =$
39. $19 - 31 =$
40. $(-3)(15) =$
41. $\frac{-36}{-3} =$
42. $\frac{-55}{5} =$
43. $20 \cdot -5 =$
44. $-42 / 7 =$
45. $-5 \times 8 =$
46. $(-24)(-2) =$
47. $-15 / -15 =$
48. $-45 \div 5 =$
49. $-9 \cdot 7 =$
50. $\frac{-48}{12} =$
51. $\frac{-16}{-16} =$

Solving Equations

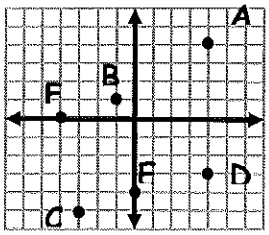
1. $x - 10 = 11$
2. $23 + x = -10$
3. $x - 15 = -37$
4. $-2 + x = -10$
5. $x + 14 = 12$
6. $x - 8 = 21$
7. $\frac{x}{10} = -7$
8. $25 = -5x$
9. $\frac{x}{-2} = -6$
10. $2y = -14$
11. $\frac{y}{-7} = 12$
12. $-22 = -11y$
13. $4x + 13 = 5$
14. $12 = -x - 11$
15. $-5y + 6 = -9$
16. $-1 = \frac{x}{4} - 7$
17. $\frac{y}{3} - 8 = 1$
18. $-3(b + 9) = -6$
19. $5x + 1 = 31$
20. $3x - 1 = 8$
21. $7x = 60 + 2x$
22. $3x = 72 - 3x$
23. $6x + 4 = 20 - 2x$
24. $6x + 3 = 23 + x$
25. $5x + 4 = 2x + 17$
26. $5x + 11 = 20x - 64$
27. $-x = 17 + 3x$

Solving Proportions

1. $\frac{4}{9} = \frac{10}{x}$
2. $\frac{5}{2} = \frac{6}{x}$
3. $\frac{5}{2} = \frac{2}{x}$
4. $\frac{21}{27} = \frac{x}{18}$
5. $\frac{15}{21} = \frac{20}{y}$
6. $\frac{26}{b} = \frac{39}{9}$

Coordinates on a Coordinate Plane

Write the ordered pair for each point.

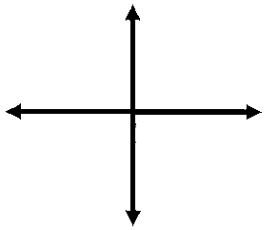


1. A _____
2. B _____
3. C _____
4. D _____
5. E _____
6. F _____

Name the quadrant or location of each point.

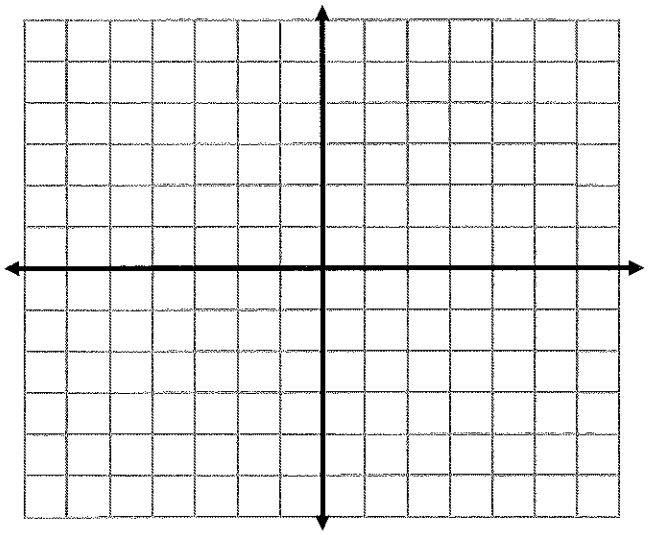
7. (5, 2) _____
8. (-3, -1) _____
9. (-2, 3) _____
10. (6, 0) _____
11. (0, -2) _____
12. (4, -3) _____

Label the quadrants!



Graph & label each point on the coordinate plane.

13. A(5, -2)
14. B(3, 5)
15. C(-3, 0)
16. D(-3, 4)
17. E(-3, -3)
18. F(-5, 1)
19. G(2, -1)
20. H(0, 4)



Area of Circles

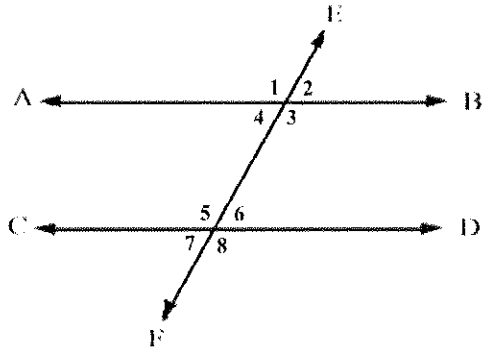
Area of a circle formulas→ $A = \pi r^2$ Use the 3.14 for π

1) radius of a circle = 4 m 2) diameter of a circle = 9 cm 3) radius of a circle = 6 in

4) radius of a circle = 2.5 ft 5) diameter of a circle = 18 cm 6) diameter of a circle = 20 in

Transversals & Angles

AB // CD and are cut by transversal EF. Given: $m < 2 = 60°$.



a) $m\angle 1 =$ ____ b) $m\angle 2 =$ ____

c) $m\angle 3 =$ ____ d) $m\angle 4 =$ ____

e) $m\angle 5 =$ ____ f) $m\angle 6 =$ ____

g) $m\angle 7 =$ ____ h) $m\angle 8 =$ ____

i) Identify a pair of vertical angles.

j) Identify a pair of supplementary angles.

k) Identify an obtuse angle.

8th Grade Units	IXL Sections	Study Island Sections
ONE - Transformations - Similarity/Congruence - Angles/Transversals	N1____ N6____ H8___ N2____ P1____ H11___ N3____ P2____ Q1___ Q2___ Q3___ Q4___ Q5___ Q6____ Q7___ Q8___ Q9___ Q10___ Q11____N10____ N11___ N12____N13____	5a____ 5b____ 5c____ 5d____ 5e_____
TWO - Rational/Irrational - Perfect Squares/Square Roots - Perfect Cubes/ Cube Roots Exponents--Scientific Notation	D1 (rational vs irrational)____ A8 _____(identify numbers as real, integer, etc.) F1___ F2___ F3___ F4____ F5___ F6___ F7___ F8___ F9___ F10___ F11___ F12__ F13__ F14___ F15___ F16__ F17___F18___ F19___F20 ___ (exponents, perfect squares/square roots, and perfect cubes/roots) G1____ G2____ G3____G4____ (Scientific Notation) D6___ D7___ D8____ (rational number conversion)	2a_____ 2b_____ 3a_____ 3b_____ 3c_____
THREE - Pythagorean Theorem - Volume of Cylinders, Cones, and Spheres	N31(volume)_____ N32 (volume)_____ O1____ O3_____ O2____ O4_____ O5_____ (Pythagorean Theorem) P4 (distance formula)_____	5f_____ 5g_____ 5h_____
FOUR - Linear Equations - Slopes - Multiple Representations of linear equations - Functions	W1____ W2____ W3___ W4____ W5____ W6____ W7____ W8___ W9___ W10___ (linear equations) X1___ X7____ X8_____ X9____ X5___ X10____ X11___ X 12____ X14____	4a_____ 4b_____ 4c_____ 4d_____
FIVE - Scatter plots - Two way tables	BB8_____ AA14_____ (scatter plots)	6a_____ 6b_____ 6c_____
SIX - Solving Equations - Solving Systems of Equations using Graphing, Eliminations, and Substitution	U1____ U2____ U3____ U4____ U5____ U6____ U7____ U8____ U9____ U10____ U11____ U12____ (solving one variable equations) Y1____ Y2____Y3____Y4____ Y5___ Y6___ Y7___ Y8____ Y9____ Y10___ Y11___ (solving systems of Equations)	3d____ 3e____ 3f_____