Math Summer Practice

1) These problems are to be used to keep students sharp over the summer on skills they will need next year when they enter Geometry or Algebra.

2) Students should be familiar with the concepts covered in the practice problems.

3) Students should complete practice WITHOUT a CALCULATOR.

4) The HELP and PRACTICE links are meant to be used on a computer. Students can click on the underlined link and will be directed to website for assistance and additional practice problems on the specific topic. The HELP links are video explanations, while the PRACTICE links give students endless practice problems where they can type in their answers and get immediate feedback.

5) The OTHER USEFUL LINKS are websites where students can REPEAT practice. Students should be proficient in their Multiplication tables; Perfect Squares; and Mental Math Calculations. This section should be done daily if possible.

6) Students and Parents with Internet access should become familiar with these websites:

   a. KhanAcademy.com   (Smart Phone App Available)

   b. YouTube.com   (Smart Phone App Available)

   c. KutaSoftware.com

   d. IXL.com

   e. PurpleMath.com/modules/index.htm

7) Practice is essential for success in math at any level. Try to focus on one section per week.

Have a Great Summer!

Sincerely,
CVHS Math Department

Section A: Addition/Subtraction of Integers
1) $180 + (-21)$
2) $360 - (100 + 48 - 25)$
3) $360 - 49 - 121$
4) $180 - 81 - 16$
5) $180 - (36 + 101)$

Help: Khan Academy: Adding and Subtracting
Practice: Khan Academy: Adding/Subtracting Integers

Section B: Solving for X
6) $45 + 25 + x = 180$
7) $360 = 135 + 43 + x + 128$
8) $x + x + x = 90$
9) $x + 30 + 2x + 20 + 2x = 180$
10) $(3x - 20) + (4x + 50) + (3x + 70) = 360$

Help: YouTube: Combine Like Terms and Solve for X
Practice: Khan Academy Two Step Equations

Section C: Multiplying/Dividing Decimals
(Round to nearest tenth)
11) $3(0.138)$
12) $0.405 \div 6$
13) $0.777 = \frac{x}{4}$
14) $3 = \frac{0.501}{x}$
15) $7 = \frac{0.201}{x}$

Help: YouTube: Multiply and Divide Decimals
Practice: Khan Academy Multiply Decimals
          Khan Academy Divide Decimals

Section D: Fractions Equal to Fractions (Proportions)
16) $\frac{3}{5} = \frac{x}{15}$
17) $\frac{4}{13} = \frac{12}{x}$
18) $\frac{92}{x} = \frac{46}{41}$
19) $\frac{7}{x} = \frac{21}{36}$
20) $\frac{x}{11} = \frac{44}{121}$

Help: YouTube Solving Proportions
Practice: Khan Academy Solving Proportions

Section E: Find the distance between these points.
21) (-2,1) and (1,5)
22) (-3,4) and (5,4)
23) (-4,-5) and (1,-2)
24) (5,4) and (3,2)
25) (3,-2) and (11,4)

Help: Khan Academy Distance Formula
Practice: Purple Math Distance Formula

Section F: Find the midpoint between these points.
26) (5,1) and (-1,5)
27) (-1,-1) and (-5,-5)
28) (-4,2) and (2,2)
29) (-4,-1) and (5,3)
30) (-10,-3) and (-2,3)

Help: Khan Academy Midpoint Video
Practice: Khan Academy Midpoint Formula
          IXL Midpoint Practice

Section G: Simplifying Radicals
31) $\sqrt{8}$
32) $\sqrt{20}$
33) $\sqrt{32}$
34) $\sqrt{75}$
35) $\sqrt{40}$

Help: YouTube Simplifying Radicals
       Khan Academy Video Radicals
Practice: Khan Academy Radicals
          IXL Simplifying Radicals

Section H: Solving Equations with variables on both sides
36) $8x - 2 = -9 + 7x$
37) $x + 5 = -5x + 5$
38) $5x - 14 = 8x + 4$
39) $x - 1 = 5x + 3x - 8$
40) $2x + 3x + 10 = 55 - 6x - 4x$

Help: Khan Academy Variables on both Sides
Practice: Khan Academy Practice with Variables on both Sides

Section I: Solving Equations using Distributive Property
41) $2(4x - 3) - 8 = 4 + 2x$
42) $-(1 + 7x) - 6(-7 - x) = 36$
43) $-3(4x + 3) + 4(6x + 1) = 43$
44) $-18 - 6x = 6(1 + 3x)$
45) $-5(1 - 5x) + 5(-8x - 2) = -4x - 8x$

Help: Khan Academy Equations with Distributive Property
Practice: Khan Academy Distribution Equations

Other Useful Links
I.   Multiplication Timed Tests
II.   Practice What You Need
III.   Know Your Perfect Squares
IV.   Identifying 3 Dimensional Figures
V.   Order of Operations
VI.   Timed Mental Math Practice

ANSWERS

Section A: Addition/Subtraction of Integers
1) 159
2) 237
3) 190
4) 83
5) 43
Help: Khan Academy: Adding and Subtracting
Practice: Khan Academy: Adding/Subtracting Integers

Section B: Solving for X
6) $x = 110$
7) $x = 54$
8) $x = 30$
9) $x = 26$
10) $x = 26$
Help: YouTube: Combine Like Terms and Solve for X
Practice: Khan Academy Two Step Equations

Section C: Multiplying/Dividing Decimals
(Round to nearest hundredth)
11) 0.41
12) 0.07
13) 3.11
14) 0.17
15) 0.03

Help: YouTube: Multiply and Divide Decimals
Practice: Khan Academy Multiply Decimals
Khan Academy Divide Decimals

Section D: Fractions Equal to Fractions (Proportions)
16) x=9
17) $x = 39$
18) x=82
19) x=12
20) $x = 4$
Help: YouTube Solving Proportions
Practice: Khan Academy Solving Proportions

Section E: Find the distance between these points.
21) 5
22) 8
23) $\sqrt{34}$
24) $\sqrt{8}$
25) 10
Help: Khan Academy Distance Formula
Practice: Purple Math Distance Formula

Section F: Find the midpoint between these points.
26) (2,3)
27) (-3,-3)
28) (-1,2)
29) ($\frac{1}{2}$,1)
30) (-6,0)
Help: Khan Academy Midpoint Video
Practice: Khan Academy Midpoint Formula
IXL Midpoint Practice

Section G: Simplifying Radicals
31) $2\sqrt{2}$
32) $2\sqrt{5}$
33) $4\sqrt{2}$
34) $5\sqrt{3}$
35) $2\sqrt{10}$
Help: YouTube Simplifying Radicals
Khan Academy Video Radicals
Practice: Khan Academy Radicals
IXL Simplifying Radicals

Section H: Solving Equations with variables on both sides
36) -7
37) 0
38) -6
39) 1
40) 3
Help: Khan Academy Variables on both Sides
Practice: Khan Academy Practice with Variables on both Sides

Section I: Solving Equations using Distributive Property
41) 3
42) 5
43) 4
44) -1
45) -5
Help: Khan Academy Equations with Distributive Property
Practice: Khan Academy Distribution Equations

Other Useful Links
I. Multiplication Timed Tests
II. Practice What You Need
III. Know Your Perfect Squares
IV. Identifying 3 Dimensional Figures
V. Order of Operations
VI. Timed Mental Math Practice