EASTERN CHRISTIAN MIDDLE SCHOOL
SUMMER MATH

Hooray! Summer is here! You have worked hard for 10 months of the school year. Now, you deserve a break! So enjoy your summer vacation! However, I don't want you to lose the benefits of all that hard work you did in school this past year. So, after you take a break, come back to work, but on a summer schedule.

This packet is designed to reinforce the skills learned in the school year so that in September we will be able to move right on. Working three or four days a week, the idea is to spend 5 - 15 minutes each day doing a little math work. Some days are a little more work than others, but none of the days should take you more than 15 minutes. You may choose to do the work once a week instead of every day. That would be a good idea. What would not be a good idea would be for you to do all the work next week. That would not keep the benefits growing all summer. All of the problems are concepts that we learned or reviewed in 7th grade. Make sure that you read the instructions carefully. Show all of your work. If you forget how to do any of the problems and you did not keep your notes from our class, www.khanacademy.org is a great source that gives step-by-step instructions for all types of math concepts. An answer key will be provided for your parents to access on the Nest. After you do a section or a page of the packet, have your parent correct that section. Try again any problems that you got incorrect.

Please remember to bring the completed packet in, along with the parent signature page on the first day of school.

Have a wonderful summer!

Mrs. Flim

My child completed the summer packet and I reviewed their answers with them.

_____

Parent Signature

Week 1, Day 1: **Subtract.**

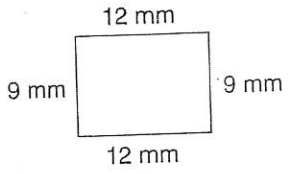
1. $7 - 13$
2. $-4 - 8$
3. $1 - 17$
4. $-6 - (-2)$
5. $3 - (-8)$
6. $5 - (-2)$
7. $-3 - 6$
8. $-8 - 21$
9. $4 - 11$
10. $-7 - (-10)$

Week 1, Day 2: **Solve the expression by using order of operations.**

1. $3(4 + 1) - 4$
2. $3 + 6(2 + 3)$
3. $14 \div 2 - (6 - 2)$
4. $4(2 + 3) \div (4 - 2)$
5. $3(2 + 6) + 4(7 - 3)$
6. $2(12 \div 3) - 8$
7. $8(4 + 2) \div (2 \cdot 6)$
8. $9 - (3 - 2) + 3 \cdot 4$
9. $2 + 7 - 8 \div 4 - 1$
10. $6 - 10 \div 5 + 2 \cdot 6$

Week 1, Day 3: **Find the area of each rectangle.**

1.



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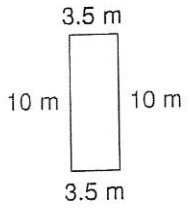

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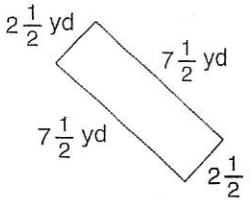
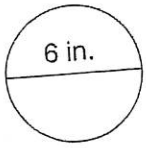


Find the circumference of each circle to the nearest tenth. The formula is $C = 2\pi r$ **or** $C = \pi d$**. Use 3.14 for** π**.**

4.



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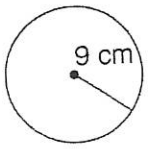

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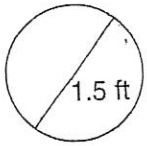
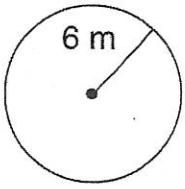


Find the area of each circle to the nearest tenth. The formula is $A = \pi r^2$**. Use 3.14 for** π**.**

7.



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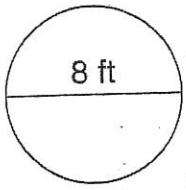

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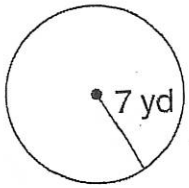


Week 1, Day 4: **Solve the equation. Make sure you show proper work.**

1. $b + 9 = 20$

2. $14 + x = 65$

3. $y - 73 = 56$

4. $40 = n - 40$

5. $\frac{h}{6} = 12$

6. $24 = \frac{a}{2}$

7. $42 = 6m$

8. $3x = 81$

9. $4x + 8 = 28$

10. $27 = 4m + 3$

Week 2, Day 1: **Combine like terms.**

1. $5a + a + a$

2. $8y + 2y + 6 + 4$

3. $7x + 3 + 2 + 2x$

4. $14c + 10c + 2 + 1$

5. $5a + 3a + 9 - 8$

6. $5a + 3 + 9a - 8$

7. $11c - 4c + 12 - 12$

8. $11m - 4 + 10 - 12m$

9. $14j - 14j + 8 - 3$

10. $14j - 14 + 8j - 3$

Week 2 Day 2: **Solve each problem. SHOW YOUR WORK!**

1. $\begin{array}{r} 9.42 \\ +\ 0.83 \\ \hline \end{array}$

2. $\begin{array}{r} 84 \\ -\ 11.61 \\ \hline \end{array}$

3. 0.23 + 4.7 + 79 =

4. 92.1 – 7.63 =

5. $\begin{array}{r} 6.3 \\ \times\ 5.9 \\ \hline \end{array}$

6. $\begin{array}{r} 0.32 \\ \times\ 8.2 \\ \hline \end{array}$

7. $36\overline{)10.08}$

8. $93\overline{)59.52}$

9. $3.3\overline{)8.349}$

10. $0.042\overline{)8.022}$

Week 2, Day 3: **Solve each equation showing proper work.**

1. $6.7 + n = 25.6$

2. $n - 0.85 = 3.6$

3. $n - 0.45 = 8.85$

4. $n - 45.6 = 0.18$

5. $n + 9.5 = 92.4$

6. $47.8 + n = 60.1$

7. $7.3 + n = 14.02$

8. $n - 54.3 = 3.57$

9. $n - 14.9 = 7.34$

10. $n + 7.04 = 8.86$

Week 2, Day 4: **Add.**

1. $-4 + (-2) =$

2. $7 + (-16) =$

3. $-11 + 12 =$

4. $7 + (-15) =$

5. $-7 + 5 =$

6. $-4 + (-6) =$

7. $9 + (-6) =$

8. $-17 + (-8) =$

9. $-11 + (-16) =$

10. $18 + (-3) =$

Week 3, Day 1: **Add or subtract. Make sure your answer is in simplest form. SHOW YOUR WORK!**

1. $$\begin{array}{r} 4\frac{1}{3} \\ + \\ 3\frac{1}{2} \\ \hline \end{array}$$

2. $$\begin{array}{r} 7\frac{5}{9} \\ + \\ 4\frac{2}{3} \\ \hline \end{array}$$

3. $$\begin{array}{r} 2\frac{5}{9} \\ + \\ 7\frac{5}{6} \\ \hline \end{array}$$

4. $$\begin{array}{r} 3\frac{1}{2} \\ + \\ 5\frac{5}{6} \\ \hline \end{array}$$

5. $$\begin{array}{r} 6\frac{2}{3} \\ + \\ 2\frac{5}{8} \\ \hline \end{array}$$

6. $$\begin{array}{r} 14\frac{1}{2} \\ - \\ 9\frac{1}{5} \\ \hline \end{array}$$

7. $$\begin{array}{r} 12\frac{2}{3} \\ - \\ 8\frac{5}{8} \\ \hline \end{array}$$

8. $$\begin{array}{r} 8\frac{1}{2} \\ - \\ 3\frac{5}{6} \\ \hline \end{array}$$

9. $$\begin{array}{r} 7 \\ - 4\frac{3}{4} \\ \hline \end{array}$$

10. $$\begin{array}{r} 7\frac{1}{3} \\ - \\ 2\frac{5}{9} \\ \hline \end{array}$$

Week 3, Day 2: ***Translate each expression. Use "x" for your variable.***

1. *the sum of a number and 3*
2. *6 less than a number*
3. *two times a number*
4. *8 more than a number*
5. *a number minus 5*
6. *a number divided by 4*
7. *1 more than two times a number*
8. *7 less than four times a number*
9. *4 less than a number*
10. *1 less than three times* a number

Week 3, Day 3: **Solve each proportion.**

1. $\frac{21}{12} = \frac{n}{28}$
2. $\frac{n}{36} = \frac{10}{15}$
3. $\frac{9}{12} = \frac{n}{32}$
4. $\frac{n}{25} = \frac{3}{5}$
5. $\frac{n}{5} = \frac{24}{10}$
6. $\frac{n}{16} = \frac{4}{8}$
7. $\frac{5}{12} = \frac{n}{60}$
8. $\frac{16}{40} = \frac{n}{25}$
9. $\frac{4}{6} = \frac{n}{15}$
10. $\frac{10}{15} = \frac{n}{30}$

Week 4, Day 1: **Change each percent to a fraction or mixed number in simplest form.**

1. 25%
2. 72%
3. 125%
4. 120%
5. 48%

Change each percent to a decimal.

6. 74%
7. 6%
8. 150%
9. 3.7%
10. 1268%

Week 4, Day 2: **Multiply or divide.**

1. (-6)(12) =
2. (-5)(8) =
3. (-3)(-4)(9) =
4. -6 • 8 • 2 =
5. (-2)(-4)(-7)(3) =
6. -40 ÷ 2
7. $\frac{3}{-3} =$
8. $\frac{-96}{8} =$
9. $\frac{-48}{-6} =$
10. $\frac{-224}{16} =$

Week 4, Day 3: **Solve each equation. Make sure you show proper work.**

1. $-2x = 6$

2. $30t = -30$

3. $-21 = -3t$

4. $-330 = 15y$

5. $\frac{b}{-3} = 9$

6. $-4 = \frac{n}{-8}$

7. $15 = \frac{a}{-2}$

8. $\frac{m}{-18} = -6$

9. $-6n = 42$

10. $-20 = \frac{y}{-10}$

Week 5, Day 1: **Multiply or divide. Answer must be in simplest form. SHOW YOUR WORK!**

1. $2\frac{1}{3} \times 1\frac{2}{3} =$

2. $3\frac{3}{4} \times -2\frac{2}{9} =$

3. $4 \times 2\frac{3}{8} =$

4. $-4\frac{2}{5} \times 3\frac{3}{4} =$

5. $-2\frac{1}{3} \times -4\frac{1}{2} =$

6. $9\frac{1}{2} \div 3\frac{1}{2} =$

7. $2\frac{1}{2} \div 1\frac{3}{4} =$

8. $-17\frac{1}{2} \div -3\frac{3}{4} =$

9. $-7\frac{1}{3} \div 2\frac{2}{5} =$

10. $5\frac{5}{6} \div 3\frac{1}{3} =$

Week 5, Day 2: **Write a proportion and solve.**

1. 14% of what number is 14?

2. 60 is 48% of what number?

3. 75% of what number is 63?

4. 3% of 400 is what number?

5. What percent of 25 is 40?

6. 17 is what percent of 25?

7. 18 is what percent of 30?

8. 75% of 240 is what number?

9. What number is 60% of 120?

10. 20% of 80 is what number?

Week 5, Day 3: **Solve the equation. Make sure you show proper work.**

1. $f + 12 = -5$

2. $-12 = y + 20$

3. $w - 6 = 20$

4. $x - 19 = -18$

5. $n - (-7) = 16$

6. $y + 5 = 1$

7. $-4 = -9 + n$

8. $-13 = w + 14$

9. $m + 6 = -8$

10. $a - 4 = -1$

Week 6, Day 1: **Subtract.**

1. $17 - 28 =$

2. $38 - 56 =$

3. $40 - (-40) =$

4. $34 - (-17) =$

5. $-18 - 12 =$

6. $-32 - 64 =$

7. $-16 - 18 =$

8. $-4 - (-4) =$

9. $-3 - (-8) =$

10. $-5 - (-16) =$

Week 6, Day 2: **Solve each equation showing proper work.**

1. $6n+2=14$

2. $3n-5=10$

3. $-4n-7=21$

4. $-7n+8=-6$

5. $9n-8=-35$

6. $\frac{n}{3}+6=10$

7. $\frac{n}{5}-9=11$

8. $6+\frac{n}{-2}=8$

9. $-4+\frac{n}{7}=-12$

10. $\frac{n}{-3}+8=-1$

Week 6, Day 3: **Evaluate when a = 20, b = -4, c = 2, and d = 5.**

1. $a + b$

2. $ab - d$

3. $\frac{a}{b}$

4. $d(b+c)$

5. $d - b$

6. $\frac{a}{d} + d^c$

Week 7, Day 1: **Distribute and combine like terms, if necessary.**

1. $6(x-7)$

2. $-8(9+4x)$

3. $\frac{1}{3}(6x+9)$

4. $5(x+2)+3(x-2)$

5. $-3(x+9)+7(5+2x)$

6. $8(x-1)-2(x+5)$

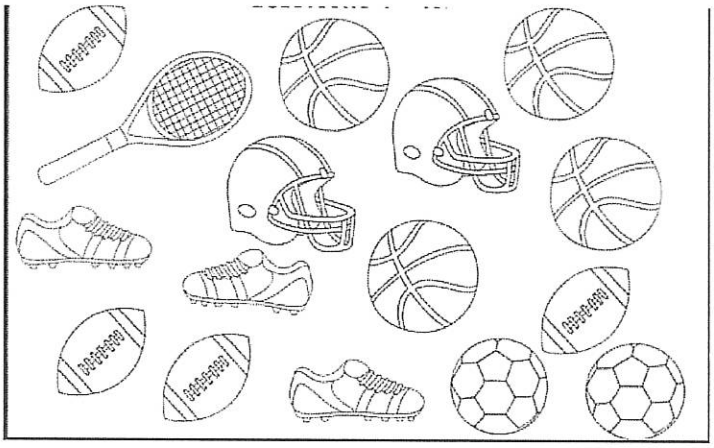
7. $\frac{1}{4}(4x+12)+3(x-3)$

8. $-1(5+2x)-6(x-1)$

2. An ice chest at a birthday party has a variety of drinks. If you randomly select a drink, do not replace it, and then randomly select another drink what is the probability of selecting a lemon-lime soda and an orange soda?

DRINK	QUANTITY
LEMON-LIME	6
COLA	8
ORANGE	6

Use the following picture to answer questions 3 – 6.



3. $P(football)$

4. $P(helmet)$

5. $P(soccer\_ball\_or\_cleats)$

6. $P(helmet\_or\_basketball)$

7. Sam receives a shipment of 36 football helmets. Of the 36 football helmets in the shipment, four of them were scratched and need to be returned. If another shipment of 108 helmets arrive, how many are likely to be scratched?