



Strathmore Secondary College

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Year 7 Homework Sheet No. 10

To be completed on loose leaf paper

Due Date: _____

1. Evaluate:

a) $-4 + 7$

b) $-8 - 5$

c) $14 + -19$

2. Find the answers and simplify where possible:

a) $\frac{3}{4} + \frac{6}{7}$

b) $\frac{2}{5} \times \frac{3}{4}$

c) $\frac{9}{10} \div \frac{3}{4}$

3. Evaluate:

a) $20.34 - 13.75$

b) 2.768×100

c) $13.65 \div 1000$

4. Write down the next three terms in the following pattern:

a) 13, 15, 17, 19, ...

b) 14, 11, 8, 5, ...

c) 1, 1, 2, 3, 5, 8, 13, ...

5. Your friend was sitting in the restaurant with a box of toothpicks. He began to arrange the toothpicks in a pattern of squares with diagonals as shown at right.



a Use your toothpicks to make a square with a diagonal. How many toothpicks do you need?

b Keep building. Repeating the pattern shown, how many toothpicks do you need for:

i two squares with diagonals?

ii three squares with diagonals?

iii four squares with diagonals?

iv five squares with diagonals?

c Letting s be the number of squares and t be the number of toothpicks, record your answers in the table below.

s	1	2	3	4	5
t					

d. How many toothpicks do you need to make 20 squares with diagonals?

6. Simplify the following expressions:

a $7k + 8k$

b $14r - 3r + 5 + r$

c $2a + 6g - 4n + 3a$

d $8a + 3c - a + 7$

e $8m - 5m + 12m + 6$

f $7t + 3t + t - 5g + 2t - g$

g $4 + 13e - 2 - 6e + 7$

h $7ty + 8k + 5ty - 8k^2$