**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Advanced Algebra II – Assignment 1-7**

2-29 Simplify each expression below.

a.  b. (mn)3

c. (3mn)3 d. 

2-77 Simplify each expression.

a. (3x)2 b. 3(3x)2 c.  d. 

2-110 Toss three coins in the air. Make a list of all possible outcomes. Find the probability that:

1. all three coins land *heads* up.
2. Two of the coins land *tails* up.

2-111 Kiah and Leah are working on homework problems that involve arithmetic sequences. Kiah wrote down (2,4) and (3,5) from one sequence, and Leah had (3,2) and (0,3) for a different sequence. Find a rule for each sequence.

2-112 Find a rule for each sequence.

a. t(n) = number of apples in Figure n

Figure 1 Figure 2 Figure 3

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  

b. c.

|  |  |  |  |
| --- | --- | --- | --- |
| n | t(n) | n | t(n) |
| 1 | 7 | 5 | -20 |
| 2 | 4 | 6 | -10 |
| 3 | 1 | 7 | -5 |

d. e.

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Cost | n | t(n) |
| 2 | $2000 | 4 | 12 |
| 3 | $6000 | 5 | 36 |
| 4 | $18000 | 6 | 108 |

2-113

The right triangle shown below has a height of 8 cm. and an area of 60 square cm.

1. Find the measure of <A to the nearest tenth.
2. Find the perimeter of the triangle.

 B

 8

 C A

2-115 Simplify each expression.

a. x(x + 2) b. 

1. 6( d. 5(x2 + 2x + 1) – 3(2x2 -3x + 1)