Algebra Review Day

1. Use the backtracking method to solve each equation.
    a. 3(2n+4)=24

    [ ] [ ] [ ] [ ]

    b. $\dfrac{2n+4}{3} = 4$

    [ ] [ ] [ ] [ ]

    c. $\dfrac{5n}{3} + 6 = 16$

    [ ] [ ] [ ] [ ]

    d. $\dfrac{2(4n+4)}{8} + 7 = 10$

    [ ] [ ] [ ] [ ] [ ]

e. $\dfrac{3n+9}{6} + 5 = 8$

f. $6n + 8 = 20$

g. $7(n+3) - 5 = 23$

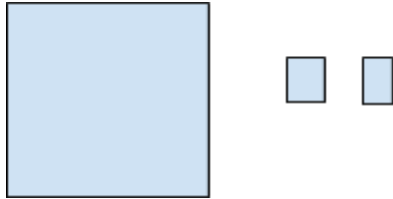h. $2(6n-3) - 4 = 14$

i. $12n - 5 = 19$

2. Solve for each and then write the answer using algebra

Example: What happens when this is divided by by 3?

Answer: n+2

a. What happens when you add one more than your special number?

Answer:

b. What happens when you make this one number larger?

Answer:

c. What happens when you multiply this by 3?

Answer:

3. Pattern of Petal's
   a. Use the pattern below to sketch the next two figures

Figure 1   Figure 2   Figure 3   Figure 5

B. Complete the table below

Fig #	# of Petals
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

C. How many Petals would you need to build the following figures?

13th_____

24th_____

57th_____
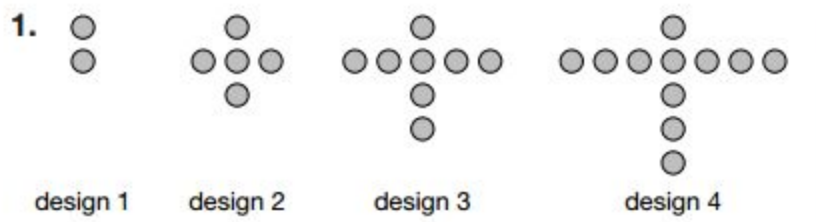
D. Describe the pattern in words:

E. Write a rule for the pattern

F. Graph on a separate piece of paper

Extension: Which figure has 235 petals?

5. Pattern of Dot's
   a. Use the pattern below to sketch the next two figures

1.

design 1   design 2   design 3   design 4

B. Complete the table below

Fig #	# of Dots
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

C. How many Dots would you need to build the following figures?

13th_____

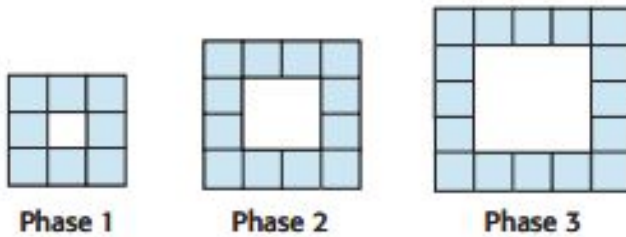24th_____

57th_____

d. Describe the pattern in words:

e . Write a rule for the pattern

f. Graph on a separate piece of paper

Extension Which figure number would have 299 dots?

4. Pattern of Blocks
   a. Use the pattern below to sketch the next two figures

Phase 1   Phase 2   Phase 3

B. Complete the table below

C. How many Blocks would you need to build the following figures?

Fig #	# of Dots
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

13th_____

24th_____

57th_____

D. Describe the pattern in words:

E. Write a rule for the pattern

F. Graph on a separate piece of paper?

Which figure number would have 604 tiles?