Name _____ Date _____

Skills Maintenance

Exponents and Repeated Multiplication

Activity 1

Rewrite each of the problems with exponents as repeated multiplication. Then use your calculator to solve.

Model	2^5 $2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 32$

1. 3^4 _____
2. 4^2 _____
3. 5^3 _____
4. 2^6 _____
5. 1^9 _____

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Unit Review

Square Roots and Irrational Numbers

Activity 1

Use a calculator to find the square roots for the numbers in the table. Round your answer to the nearest hundredth.

Number	Square Roots
20	
32	
45	
61	

Activity 2

Solve the equations with square roots. Remember that anything to the 0 power is 1. Also remember that when you multiply powers with the same base, you can add their exponents.

1. $2^2 + 2^3$ _____

2. 3^0 _____

3. $4^2 + 4^2$ _____

4. $3^0 + 2^2$ _____

5. $2^0 + 2^3$ _____

6. $100^0 + 2^2$ _____

7. $2^2 + 5^0$ _____

8. $3^2 + 3^0$ _____

Activity 3

Find the value of x.

1. $\sqrt{3 + x} = 4$ $x =$ _____

2. $x^2 = 64$ $x =$ _____

3. $x^2 + 9 = 25$ $x =$ _____

4. $\sqrt{4x} = 8$ $x =$ _____

5. $2x^2 = 50$ $x =$ _____

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Activity 4

Use what you know about square numbers to estimate the number in each problem. Use the number line to show how you figured out your answer.

1. $\sqrt{20}$

   Show the perfect square numbers around 20 and where $\sqrt{20}$ would be on the number line.

   What is your estimated answer of $\sqrt{20}$? _____

2. $\sqrt{27}$

   Show the perfect square numbers around 27 and where $\sqrt{27}$ would be on the number line.

   What is your estimated answer of $\sqrt{27}$? _____

3. $\sqrt{35}$

   Show the perfect square numbers around 35 and where $\sqrt{35}$ would be on the number line.

   What is your estimated answer of $\sqrt{35}$? _____

Name _____ Date _____

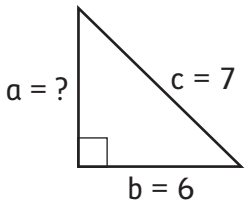
Activity 5

Find the missing side length for each of the right triangles using the Pythagorean theorem.

1. What is the length of side *a*? _____

Show your work here.

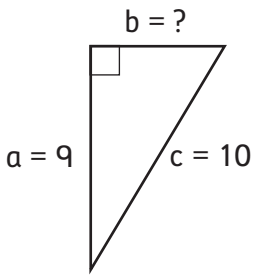
$a^2 + b^2 = c^2$



2. What is the length of side *b*? _____

Show your work here.

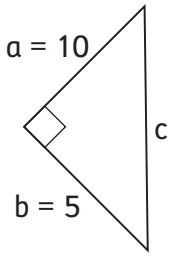
$a^2 + b^2 = c^2$



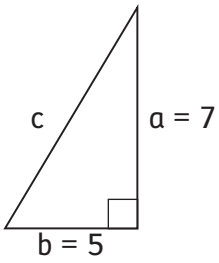
3. What is the length of side *c*? _____

Show your work here.

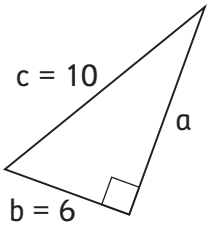
$a^2 + b^2 = c^2$



4. What is the length of side *c*? _____



5. What is the length of side *a*? _____



Name _____ Date _____

Unit Review

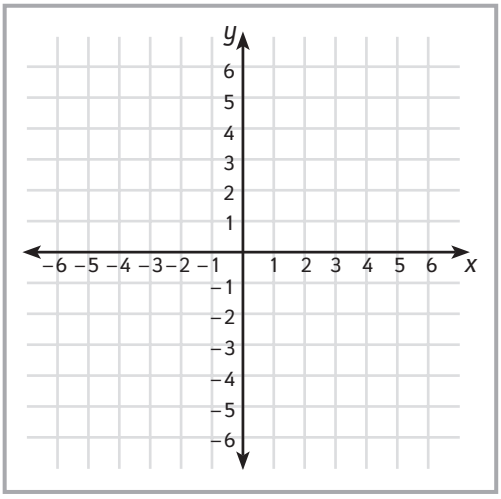
Non-Linear Functions

Activity 1

For each of the *x*/*y* tables, write the linear function using an equation. Then graph the function.

1.

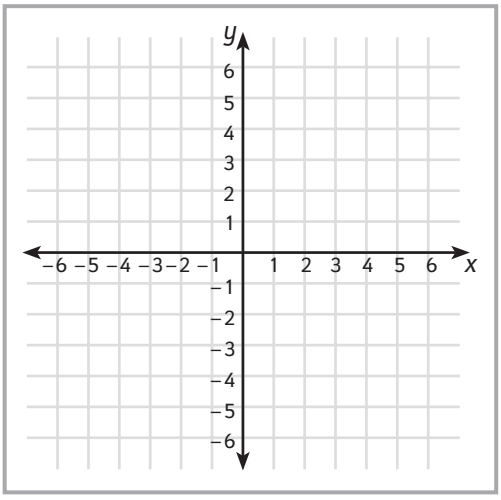
x	*y*
1	3
2	6
3	9
4	12
5	15



What is the function? _____

2.

x	*y*
1	4
2	8
3	12
4	16
5	20



What is the function? _____

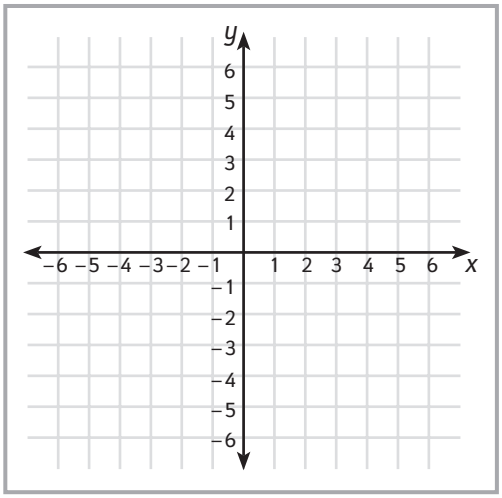
Name _____ Date _____

Activity 2

Fill in the *y*-values in the table for the function. Then draw the function on the coordinate graph.

$y = -x^2$

x	*y*
–3	
–2	
–1	
0	
1	
2	
3	



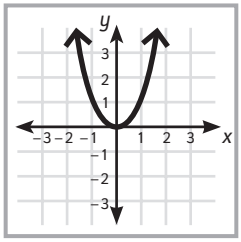
Activity 3

Circle the graph that goes with each function. Fill in values in the *x/y* table to help you find the corresponding graph.

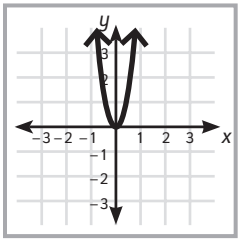
1. $y = \frac{1}{4}x^2$

x	*y*

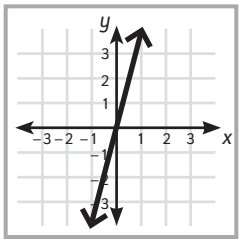
(a)



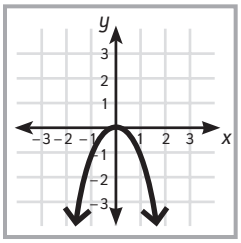
(b)



(c)



(d)

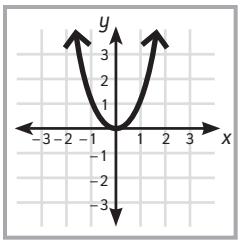


Name _____ Date _____

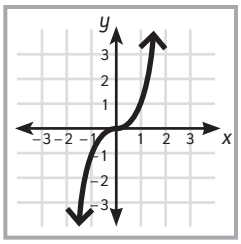
2. $y = x^3$

x	*y*

(a)



(b)



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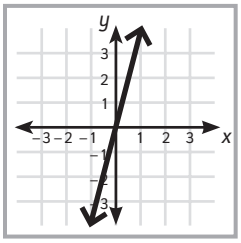
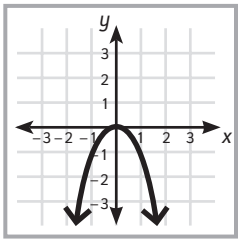


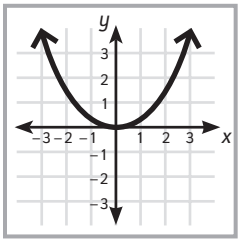
(d)



3. $y = -3x^2$

x	*y*

(a)



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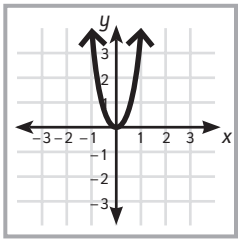

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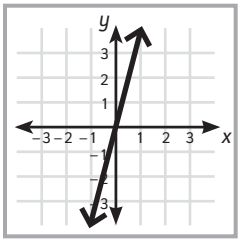
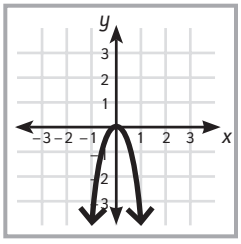


(d)



mBook Reinforce Understanding
Use the **mBook** ***Study Guide*** to review lesson concepts.