****

**1-3.** One focus of this Geometry course is to help you recognize and accurately identify a shape. For example, a **rectangle** is a four-sided shape with four right angles. Which of the shapes below can be called a rectangle? More than one answer is possible.



**1-4.** Calculate the values of the expressions below. Show all steps in your process.

* 1. 2 · (3(5 + 2) − 1)
	2. 6 − 2(4 + 5) + 6
	3. 3 · 8 ÷ 22 + 1
	4. 5 − 2 · 3 + 6(32 + 1)

**1-6.** Simplify the expressions below as much as possible.

a. 2*a* + 4(7 + 5*a*)

b. 4(3*x* + 2) − 5(7*x* + 5)

*c. x*(*x* + 5)

d. 2*x* + *x*(*x* + 6)

**1-5.** Match each table of data with its rule, then **briefly** explain why it matches the data.

Rules: 1. y = x 2. y = 3x - 1 3. y = x + 3

 4. y = x2 5. y = -x2 6. y = x2 + 3

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***x*** | −1 | 3 | 1 | 0 | −2 | 2 |
| ***y*** | −1 | −9 | −1 | 0 | −4 | −4 |

a. b.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***x*** | 1 | 0 | −4 | 2 | −2 | −1 |
| ***y*** | 4 | 3 | −1 | 5 | 1 | 2 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***x*** | 3 | −2 | 1 | 0 | 2 | −3 |
| ***y*** | 12 | 7 | 4 | 3 | 7 | 12 |

c. d.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***X*** | −3 | 4 | 2 | −2 | 0 | −10 |
| ***Y*** | −10 | 11 | 5 | −7 | −1 | −31 |

**1-7.** **Examine** the graph below. Then, in a sentence or two, suggest reasons why the graph rises at 11:00 AM and then drops at 1:15 PM.

