# Math Review 14

1. How can the sequence 3, 6, 12, 24, 48, … be expressed?
   A. $3(4^x)$, where $x = 0, 1, 2, 3, …$
   B. $4x$, where x = 1, 3, 5, 7, …
   C. $3x$, where $x = 0, 1, 2, 3, …$
   D. $3(2^x)$, where $x = 0, 1, 2, 3, …$

2. What is the next term in the progression? $-3$, 4, 11, 18, …
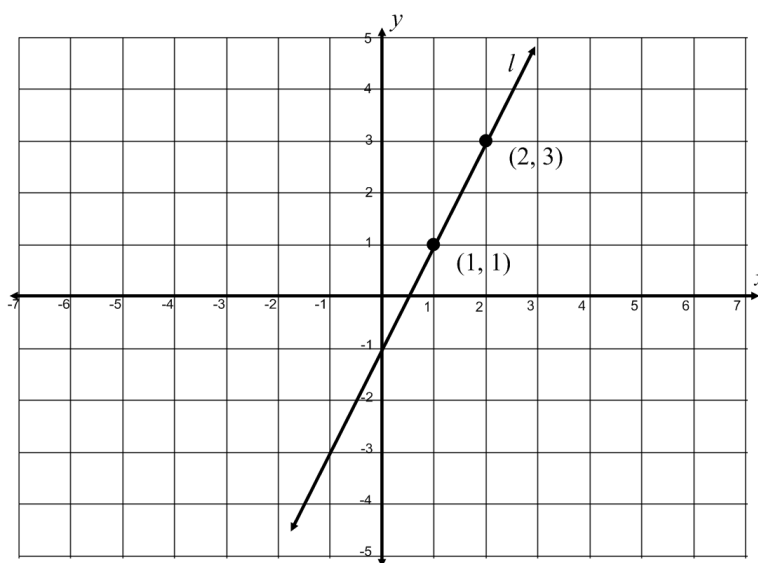   A. 19
   B. 25
   C. 30
   D. 32

3. Which of the following contains only rational numbers?
   A. 13, 6.5, $\sqrt{16}$, $6.\overline{54}$
   B. 22.18, $\dfrac{98}{7}$, $\sqrt{39}$, 2
   C. $19\dfrac{2}{13}$, $\sqrt{2}$, $\dfrac{12}{2}$, $13.\overline{63}$
   D. 52, $\dfrac{3}{2}$, $\sqrt{24}$, 3.14

4. Which of the following is an equation of a line that is perpendicular to the line $l$ in the graph?
   A. $x - 2y = 14$
   B. $x - 2y = 4$
   C. $x + 2y = 4$
   D. $2x + y = 4$



5. Thomas plans to rent a commercial mower one day next week. He will mow vacant lots and will be paid $20 for each lot he mows. The rental for the lawn mower is $75 for the day. If $l$ equals the number of lots Thomas mows, which of the following equations could be used to determine the net amount ($d$) in dollars Thomas will make that day?
   A. $d - 20l = 75$
   B. $d = 20l - 75$
   C. $d - 75 = 20l$
   D. $d = 20l + 75$

6. What is the value of $(8^3)(8^5)$? Do not use a calculator for this problem.

 A. $8^8$

 B. $8^{15}$

 C. $64^8$

 D. $64^{15}$

7. Which inequality represents the solution set shown on the number line?



7
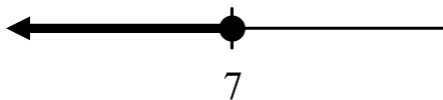
 A. $2x-3 \geq 17$

 B. $2x+3 \leq 17$

 C. $3x+2 \leq 17$

 D. $3x-2 \geq 17$

8. Consider the equation $y = -4x|-2x+6|$.    What is the value of $y$ if $x = 4$?

9. Which of these is the equation that generalizes the pattern of data in the table at the right?

 A. $f(x) = 3x$

 B. $f(x) = x+3$

 C. $f(x) = 2x+6$

 D. $f(x) = 3x+4$

| $x$ | $f(x)$ |
|---|---|
| -3 | -5 |
| -1 | 1 |
| 2 | 10 |
| 5 | 19 |

10. Use the rules for multiplying and dividing numbers in scientific notation to solve the following problems. Do not use a calculator for this problem. Leave your answers in scientific notation.

 A. $(2 \times 10^4)(3 \times 10^5)$

 B. $(5 \times 10^{-5})(7 \times 10^{10})$

 C. $(10 \times 10^4) \div (2 \times 10^2)$