1. Write an algebraic expression for the phrase.
   \textit{the product of g and 4}
   
   a. $4g$
   b. $g + 4$
   c. $\frac{g}{4}$
   d. $g - 4$

2. Write an algebraic expression for the phrase.
   $-2$ times the quantity $q$ minus 3
   
   a. $-2q - 3$
   b. $q(-2 - 3)$
   c. $-\frac{2}{q - 3}$
   d. $-2(q - 3)$

3. Evaluate the expression $(ab)^2$ for $a = 4$ and $b = 3$
   
   a. 36
   b. 24
   c. 81
   d. 144

4. Simplify the expression $-9 + 6$.
   
   a. 15
   b. -3
   c. -15
   d. 3
5. Simplify the expression \( \frac{(-9)(-8)}{(-2)} \).

a. 36  
b. -72  
c. 72  
d. -36

6. Simplify the expression \((-2.7)^0\).

a. 0  
b. -1  
c. 1  
d. -2.7

7. Simplify the expression \( (k^2)^4 \).

a. \( k^6 \)  
b. \( 2k^8 \)  
c. \( k^{16} \)  
d. \( k^8 \)

8. Simplify the expression \( \frac{k^{14}}{k^7} \).

a. \( k^7 \)  
b. \( k^{98} \)  
c. \( \frac{1}{k^7} \)  
d. \( k^{21} \)
9. Simplify the expression \(2 \cdot (10 + 5) - 5\).
   
   a. 12.5  
   b. 20  
   c. 25  
   d. 120

10. Evaluate \(b - 2a - c\) for \(a = -7\), \(b = 3\), and \(c = -7\).
   
   a. 24  
   b. 3  
   c. 10  
   d. -18

11. Solve the equation \(\frac{y}{4} = -10\).
   
   a. -2 \(\frac{1}{2}\)  
   b. -14  
   c. 40  
   d. -40

12. Solve the equation \(\frac{3}{7}x + 6 = 9\).
   
   a. 7  
   b. 12/7  
   c. -7  
   d. 7 2/3
<table>
<thead>
<tr>
<th>13. Solve the equation $3(y + 6) = 30$.</th>
<th>14. Find the $x$- and $y$-intercept of the line $2x + 3y = -18$.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 5</td>
<td>a. $x$-intercept is 18; $y$-intercept is 18.</td>
</tr>
<tr>
<td>b. 16</td>
<td>b. $x$-intercept is -6; $y$-intercept is -9.</td>
</tr>
<tr>
<td>c. 4</td>
<td>c. $x$-intercept is 2; $y$-intercept is 3.</td>
</tr>
<tr>
<td>d. -16</td>
<td>d. $x$-intercept is -9; $y$-intercept is -6.</td>
</tr>
</tbody>
</table>

15. Tell whether the lines for each pair of equations are parallel, perpendicular, or neither.

$$7x - 4y = 4$$
$$x - 4y = 3$$

16. Write the number in standard notation.

$9 \times 10^4$.

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<tr>
<th>a. 9,000</th>
<th>b. $90^4$</th>
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<tr>
<td>c. 90,000</td>
<td>d. 360</td>
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</tbody>
</table>
17. Between what two consecutive integers is $\sqrt{151}$?
   a. 11 and 12  
   b. 14 and 15  
   c. 12 and 13  
   d. 9 and 10

18. Write $5^2$ in standard form.
   a. 7  
   b. 25  
   c. 10  
   d. 52

19. Simplify the expression $3\left[(15 - 3)^2 \div 4\right]$

20. Simplify the expression $\sqrt{6} + 2\sqrt{6}$.
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<tbody>
<tr>
<td>21. Simplify the expression $2k^8 \cdot 3k^3$.</td>
<td>22. Simplify the expression $-15$.</td>
</tr>
<tr>
<td>23. Evaluate $47 + 2d$, for $d = 3$.</td>
<td>24. Write 0.63 as a percent.</td>
</tr>
</tbody>
</table>
25. Write \(3 \cdot 3 \cdot 3 \cdot 3 \cdot 3 \cdot 3\) using an exponent.

26. Solve the equation \(z^2 - 6z - 27 = 0\) by factoring.

27. Simplify \(\frac{\sqrt{144}}{49}\).

28. Simplify the radical expression \(\frac{4}{\sqrt{21}}\) by rationalizing the denominator.
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<tbody>
<tr>
<td>29. Simplify the radical expression ( \sqrt{144} ).</td>
<td>30. Factor the expression ( r^2 - 49 ).</td>
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<tr>
<td>31. Factor the expression ( x^2 - x - 42 ).</td>
<td>32. Factor the expression ( d^2 + 10d + 9 ).</td>
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<tr>
<td>33. Expand $(2x - 6)^2$</td>
<td>34. Simplify the product using FOIL $(3x - 7)(3x - 5)$.</td>
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<tr>
<td>35. Simplify the product $2n(n^2 + 3n + 4)$.</td>
<td>36. Simplify the product $-8(-9)$.</td>
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<tr>
<td>37. Simplify the sum.  ((4u^3 + 4u^2 + 2) + (6u^3 - 2u + 8)).</td>
<td>38. Write the polynomial in standard form (4g - g^3 + 3g^2 - 2).</td>
</tr>
<tr>
<td>39. Simplify the difference ((-7x - 5x^4 + 5) - (-7x^4 - 5 - 9x)).</td>
<td>40. Write an equation in point-slope form for the line through the point ((10, -9)) with the given slope -2.</td>
</tr>
</tbody>
</table>
41. Write an equation of a line with the slope of 1 and y-intercept of 4.

42. Find the slope and y-intercept of the line \( y = \frac{4}{3}x - 3 \).

43. State the slope of a horizontal line.

44. Find the slope of the line that passes through the pair of points (1, 7), (10, 1).
45. Solve the inequality $c - 3 > 6$.

46. Solve the inequality $-\frac{x}{4} \leq 2$.

47. Solve the inequality $-8 \leq 2x - 4 < 4$.

48. Graph the function $y = x^2 - 2$.  

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<td>45</td>
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<td>47</td>
<td>48</td>
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</table>
49. Graph the function \( y = -2x + 3 \).

50. Solve the equation \( 3p - 1 = 5(p - 1) - 2(7 - 2p) \).

51. Solve the equation \( 9d = -54 \).

52. Solve the equation \( -49 = x - 50 \).
53. Solve the equation $14 = t + 7$.

54. Write an inequality for the graph.