Algebra 2: Midterm Final Review

Multiple Choice

1) Write the set in set-builder notation.

\[ \{ x \mid -4 \leq x < 2 \} \]

A \[ \{ -4, 2 \} \]  B \[ \{ x \mid 0 \leq x < 2 \} \]  C \[ \{ x \mid -4 \leq x < 2 \} \]  D \[ -4, 2 \]

2) Find the additive and multiplicative inverse of \( \frac{7}{11} \).

A additive inverse: \( -\frac{4}{11} \); multiplicative inverse: 0
B additive inverse: \( -\frac{11}{7} \); multiplicative inverse: \( \frac{11}{7} \)
C additive inverse: \( \frac{7}{11} \); multiplicative inverse: 0
D additive inverse: \( \frac{11}{7} \); multiplicative inverse: \( -\frac{7}{11} \)

3) Identify the property demonstrated by the equation \( 6 + 12 = 18 \).

A Commutative Property  B Closure Property  C Distributive Property  D Associative Property

4) Simplify \( \frac{\sqrt{6}}{\sqrt{13}} \) by rationalizing the denominator.

A \( \frac{6}{13} \)  B \( \frac{6}{\sqrt{78}} \)  C \( \frac{\sqrt{78}}{13} \)  D \( \frac{\sqrt{6}}{13} \)

5) Simplify the expression \( a^2 - 7a - 7b + 5a^2 \).

A \( 5a^2 - 7a - 7b \)  B \( 6a^2 - 7a - 7b \)  C \( -a^2 - 7b \)  D \( -2a^2 - 7b \)

6) Simplify the expression \( (-1)^{-2}(-3)^0 \).

A 0  B 1  C 1  D 3

7) Simplify the expression \( (-2a)^4(a^2b)^6 \). Assume all variables are nonzero.

A \( -16a^{16}b^6 \)  B \( 16a^{16}b^6 \)  C \( -16a^{48}b^6 \)  D \( 16a^{48}b^6 \)

8) Simplify the expression \( \frac{7.29 \times 10^{-10}}{2.24 \times 10^1} \). Write the answer in scientific notation.

A \( 3.25 \times 10^{-11} \)  B \( 3.25 \times 10^{-9} \)  C \( 3.25 \times 10^{-10} \)  D \( 3.25 \times 10^{11} \)
9) The commercial jet that travels from Miami to New York averages about 300 mi/h. The air distance from Miami to New York is 1092 miles. Write a function to represent the distance \( d \) remaining on the trip \( t \) hours after takeoff.

\[ \begin{align*}
A. d &= 300t + 1092 \\
B. d &= 1092t + 300 \\
C. d &= 300 - 1092t \\
D. d &= 1092 - 300t
\end{align*} \]

10) Determine whether the data set could represent a linear function.

<table>
<thead>
<tr>
<th>( x )</th>
<th>( f(x) )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-1</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
</tr>
</tbody>
</table>

\[ A. \text{The data set is constant.} \quad B. \text{Cannot be determined} \quad C. \text{No, the data set does not represent a linear function.} \quad D. \text{Yes, the data set could represent a linear function.} \]

11) Graph the line with slope \(-1\) that passes through \((3, 3)\).

\[ \begin{align*}
A & \quad B \\
C & \quad D
\end{align*} \]
12) Find the intercepts of $4x - 4y = -16$, and graph the line.

A. $x$-intercept: $-\frac{11}{4}$, $y$-intercept: $\frac{19}{4}$

B. $x$-intercept: $-4$, $y$-intercept: $\frac{19}{4}$

C. $x$-intercept: $-\frac{11}{4}$, $y$-intercept: $4$

D. $x$-intercept: $-4$, $y$-intercept: $4$

18) In slope-intercept form, write the equation of the line that contains the points in the table.

<table>
<thead>
<tr>
<th>$x$</th>
<th>$-2$</th>
<th>0</th>
<th>2</th>
<th>4</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>$y$</td>
<td>$-3$</td>
<td>1</td>
<td>5</td>
<td>9</td>
<td>13</td>
</tr>
</tbody>
</table>

$\text{A. } y = 2x + 1 \quad \text{B. } y = x + 2 \quad \text{C. } y = 2x - 1 \quad \text{D. } y = -x - 2$
13) Write the function \(-5x - 10y = 20\) in slope-intercept form. Then graph the function.

\[
\begin{align*}
A \quad y &= -\frac{1}{2} x - 2 \\
B \quad y &= -\frac{1}{2} x - 2 \\
C \quad y &= -\frac{1}{2} x - 2 \\
D \quad y &= -\frac{1}{2} x - 2
\end{align*}
\]

14) Determine if \(x = -2\) is vertical or horizontal. Then graph.

\[
\begin{align*}
A \quad \text{The line is horizontal.} \\
C \quad \text{The line is horizontal.}
\end{align*}
\]
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B  The line is vertical.

D  The line is vertical.

15) Solve \( \frac{2}{3} (4x - y) < 2 \) for \( y \). Graph the solution.

A  \( y > 4x - 3 \)

C  \( y > 4x + 3 \)

B  \( y < 4x - 3 \)

D  \( y > -4x + 3 \)
16) Let \( g(x) \) be the transformation, vertical translation 5 units down, of \( f(x) = 3x + 9 \). Write the rule for \( g(x) \).
\[
\text{A} \quad g(x) = 3x + 4 \\
\text{B} \quad g(x) = 5x + 9 \\
\text{C} \quad g(x) = 3x + 9 \\
\text{D} \quad g(x) = 3x - 5
\]

17) Solve the inequality \( |10 + 5x| > 10 \) and graph the solution set.
\[
\text{A} \quad (0, \infty) \\
\text{B} \quad (-\infty, \infty) \\
\text{C} \quad (-4, 0) \\
\text{D} \quad (-\infty, -4) \cup (0, \infty)
\]

19) Anchorage, Alaska and Augusta, Georgia have very different average temperatures. This is a table of the average monthly temperature in each city. Make a scatter plot for the temperature data, identify the correlation, and then sketch a line of best fit and find its equation.

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anchorage</td>
<td>15</td>
<td>19</td>
<td>26</td>
<td>26</td>
<td>47</td>
<td>54</td>
<td>58</td>
<td>56</td>
<td>48</td>
<td>35</td>
<td>21</td>
<td>16</td>
</tr>
<tr>
<td>Augusta</td>
<td>44</td>
<td>47</td>
<td>56</td>
<td>63</td>
<td>71</td>
<td>78</td>
<td>81</td>
<td>80</td>
<td>75</td>
<td>64</td>
<td>55</td>
<td>47</td>
</tr>
</tbody>
</table>

\[
\text{A} \quad \text{Positive correlation} \\
\quad y = 0.825x + 33.8
\]

\[
\text{B} \quad \text{Positive correlation}
\]

\[
\text{C} \quad \text{Negative correlation} \\
\quad y = 0.825x + 33.8
\]

\[
\text{D} \quad \text{Negative correlation}
\]
20) Translate \( f(x) = |x| \) so that the vertex is at \((-3, 2)\). Then graph.

\[ A \quad g(x) = |x - 3| - 2 \]

\[ B \quad g(x) = |x + 2| + 3 \]

\[ C \quad g(x) = |x - 2| - 3 \]

\[ D \quad g(x) = |x + 3| + 2 \]
21) Classify the system \[ \begin{align*} 7x - 8y &= -1 \\ 35x - 40y &= -8 \end{align*} \], and determine the number of solutions.

A This system is inconsistent. It has infinitely many solutions.  
B This system is consistent. It has infinitely many solutions.  
C This system is inconsistent. It has no solutions.  
D This system is consistent. It has one solution.

22) Two snow resorts offer private lessons to their customers. Big Time Ski Mountain charges $5 per hour plus $50 insurance. Powder Hills charges $10 per hour plus $30 insurance. For what number of hours is the cost of lessons the same for each resort?

A 3 hours  
B 4 hours  
C 5 hours  
D 6 hours

23) A shop makes tables and chairs. Each table takes 8 hours to assemble and 2 hours to finish. Each chair takes 3 hours to assemble and 1 hour to finish. The assemblers can work for at most 200 hours each week, and the finishers can work for at most 60 hours each week. The shop wants to make as many tables and chairs as possible. Write the constraints for the problem, and graph the feasible region. Let \( t \) be the number of tables and \( c \) be the number of chairs.

\[
\begin{align*}
\begin{cases}
t \geq 0 \\
c \geq 0 \\
200 \geq 8t + 3c \\
60 \geq 2t + c
\end{cases}
\]
24) Graph the linear equation \(6x - 5y + 10z = 30\) in three-dimensional space.

\[
\begin{align*}
& t \geq 0 \\
& c \geq 0 \\
& 200 \geq 8t + 3c \\
& 60 \geq 2t + c
\end{align*}
\]
25) Graph the inequality $5(5x - 4y) < 2(2 + 8x) - 17y.$
26) Graph the system of inequalities \[ \begin{align*} y &< -3x + 2 \\ y &\geq 4x - 1 \end{align*} \] and choose the correct graph.

A) 

B) 

C) 

D) 

27) Which point gives the minimum value of \( P = 3x - 2y \) in the feasible region shown?

A) S(4, 1) 
B) R(1, 4) 
C) T(2, 0) 
D) U(0, 1)
28) Use substitution to determine if (0, 2) is an element of the solution set for the system of equations.
\[
\begin{align*}
  x + 3y &= 6 \\
  -x + y &= 8
\end{align*}
\]
A (0, 2) is not a solution of the system.  B (0, 2) is a solution of the system.

29) Use elimination to solve the system
\[
\begin{align*}
  -3x + 5y &= 10 \\
  7x - 5y &= -10
\end{align*}
\]
A (2, 0)  B (10, 8)  C (-5, -1)  D (0, 2)

30) Classify the system
\[
\begin{align*}
  3x - 3y + 3z &= 0 \\
  5x + y - 6z &= -17 \\
  6x - 6y + 9z &= 3
\end{align*}
\]
solutions.

31) Evaluate \(3B - 2C\), if possible.
\[
B = \begin{bmatrix} 2 & 7 \\ 8 & -6 \end{bmatrix} \quad C = \begin{bmatrix} 0 & 1 \\ 4 & -2 \end{bmatrix}
\]
A \[
A = \begin{bmatrix} 0 & -2 \\ -8 & 4 \end{bmatrix}
\]
B Not possible  C \[
C = \begin{bmatrix} 6 & 19 \\ 16 & -14 \end{bmatrix}
\]
D \[
D = \begin{bmatrix} 6 & 21 \\ 24 & -18 \end{bmatrix}
\]

32) Tell whether the product of \(P_{8 \times 5}\) and \(Q_{5 \times 7}\) is defined. If so, give the dimensions of \(PQ\).
A defined; 8 \times 7  B undefined  C defined; 5 \times 5  D defined; 7 \times 8

33) Find the product \(AB\), if possible.
\[
A = \begin{bmatrix} 3 & 9 \\ 2 & 3 \\ -3 & 0 \end{bmatrix} \quad B = \begin{bmatrix} 9 & 0 & -4 \\ 2 & 6 & 4 \end{bmatrix}
\]
A \[
A = \begin{bmatrix} 45 & 24 & -27 \\ 54 & 18 & 0 \\ 24 & 4 & 12 \end{bmatrix}
\]
B \[
B = \begin{bmatrix} 39 & 81 \\ 6 & 36 \end{bmatrix}
\]
C Not possible  D \[
D = \begin{bmatrix} 45 & 54 & 24 \\ 24 & 18 & 4 \\ -27 & 0 & 12 \end{bmatrix}
\]
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34) Evaluate \[ \begin{bmatrix} 5 & -2 \\ 1 & 1 \end{bmatrix}^2 \], if possible.

A \[ \begin{bmatrix} 25 & 4 \\ 1 & 1 \end{bmatrix} \]
B \[ \begin{bmatrix} 10 & -4 \\ 2 & 2 \end{bmatrix} \]
C \[ \begin{bmatrix} 23 & -12 \\ 6 & -1 \end{bmatrix} \]
D Not possible

35) Find the determinant of the matrix \[ \begin{bmatrix} 4 & -2 \\ 5 & 0 \end{bmatrix} \].

A –10  B 10  C 20  D –8

36) Find the determinant of \( A = \begin{bmatrix} 2 & -2 & 5 \\ 7 & 10 & -1 \\ 1 & -2 & 0 \end{bmatrix} \).

A 122  B –122  C 320  D –50

37) Find the inverse of the matrix \( A = \begin{bmatrix} 3 & 4 \\ 2 & 5 \end{bmatrix} \), if it is defined.

A \[ \begin{bmatrix} \frac{5}{7} & \frac{-4}{7} \\ \frac{-2}{7} & \frac{3}{7} \end{bmatrix} \]
B \[ \begin{bmatrix} \frac{1}{3} & \frac{1}{4} \\ \frac{1}{2} & \frac{1}{5} \end{bmatrix} \]
C \[ \begin{bmatrix} \frac{3}{7} & \frac{4}{7} \\ \frac{2}{7} & \frac{5}{7} \end{bmatrix} \]
D \[ \begin{bmatrix} 5 & -4 \\ -2 & 3 \end{bmatrix} \]

38) Write the matrix equation for the system \[ \begin{align*} 3x + 2y &= -10 \\ -7x - 5y &= -5 \end{align*} \], and solve.

A \[ \begin{bmatrix} 3 & 2 \\ -7 & -5 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} -10 \\ -5 \end{bmatrix} \]
B \[ \begin{bmatrix} 3 & 2 \\ -7 & -5 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} -10 \\ -5 \end{bmatrix} \]
C \[ \begin{bmatrix} 3 & 2 \\ -7 & -5 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} -10 \\ -5 \end{bmatrix} \]
D \[ \begin{bmatrix} 3 & 2 \\ -7 & -5 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} -10 \\ -5 \end{bmatrix} \]
39) Graph \( f(x) = x^2 + 3x - 3 \).
40) Using the graph of \( f(x) = x^2 \) as a guide, describe the transformations, and then graph the function \( g(x) = (x + 6)^2 + 7 \).

- \( A \) is \( f(x) \) translated 7 units left and 6 units up.
- \( B \) is \( f(x) \) translated 6 units left and 7 units up.
- \( C \) is \( f(x) \) translated 6 units right and 7 units down.
- \( D \) is \( f(x) \) translated 7 units right and 6 units down.

41) The parent function \( f(x) = x^2 \) is reflected across the \( x \)-axis, vertically stretched by a factor of 7, and translated right 8 units to create \( g \). Use the description to write the quadratic function in vertex form.

- \( A \ g(x) = 7(x - 8)^2 \)
- \( B \ g(x) = 8(x + 7)^2 \)
- \( C \ g(x) = -7(x - 8)^2 \)
- \( D \ g(x) = -7(x + 8)^2 \)

42) Solve the equation \( x^2 = 48 - 2x \) by completing the square.

- \( A \ x = 7 \) or \( x = -7 \)
- \( B \ x = 12 \) or \( x = -16 \)
- \( C \ x = 6 \) or \( x = -8 \)
- \( D \ x = -6 \) or \( x = 8 \)

43) Write the function \( f(x) = 3x^2 + 24x + 52 \) in vertex form, and identify its vertex.

- \( A \ f(x) = (x + 4)^2 + 4; \) vertex: \((-4, 4)\)
- \( B \ f(x) = (x + 4)^2 + 4; \) vertex: \((-4, 4)\)
- \( C \ f(x) = (x + 8)^2 + 52; \) vertex: \((-8, 52)\)
- \( D \ f(x) = 3(x + 8)^2 + 52; \) vertex: \((-8, 52)\)
44) Solve the equation $2x^2 + 72 = 0$.
   A $x = \pm 6 + i$  B $x = 6 \pm i$  C $x = \pm 6$  D $x = \pm 6i$

45) Graph the complex number $3 + 2i$.

46) Write a quadratic function that fits the points (0, 7), (3, 4), and (4, 7).
   A $f(x) = x^2 + 7x - 4$  B $f(x) = x^2 + 4x + 7$  C $f(x) = -4x^2 + x + 7$  D $f(x) = x^2 - 4x + 7$

47) Find the zeros of $f(x) = 3x^2 - x + 2$ by using the Quadratic Formula.
   A $x = \frac{1}{6} \pm \frac{\sqrt{21}}{6}i$  B $x = \frac{1}{6} \pm \frac{\sqrt{25}}{6}i$  C $x = \frac{1}{2} \pm \frac{\sqrt{23}}{2}i$  D $x = \frac{1}{6} \pm \frac{\sqrt{23}}{6}i$

48) Find the number and type of solutions for $x^2 + 6x = -9$.
   A Cannot determine without graphing.  B The equation has one real solution.  C The equation has two nonreal complex solutions.  D The equation has two real solutions.
49) The perimeter of a right triangle is 40 ft, and one of its legs measures 8 ft. Find the length of the other leg and the hypotenuse.
   A 15 ft, 17 ft  B 12 ft, 20 ft  C 14 ft, 18 ft  D 13 ft, 19 ft

50) Solve the inequality $x^2 + 3x - 10 \leq -12$ by using algebra.
   A $x \leq -2$ or $x \geq 1$  B $x \leq -5$ or $x \geq 2$  C $-5 \leq x \leq 2$  D $-2 \leq x \leq 1$

51) Graph the complex number $4i$.

52) Find the absolute value $|-7 - 5i|$.
   A $-12$  B $2\sqrt{3}$  C $2\sqrt{6}$  D $\sqrt{74}$

53) Add. Write the result in the form $a + bi$.
   $(-8 - 9i) + (3 + 7i)$
   A $-1 - 6i$  B $-11 - 16i$  C $-5 - 2i$  D $-17 + 10i$
54) Multiply $3i(4 - 2i)$. Write the result in the form $a + bi$.
   \[ A \ 6 - 12i \quad B \ -6 + 12i \quad C \ -6 - 12i \quad D \ 6 + 12i \]

55) Rewrite the polynomial $x^2 - 6 + 7x^4 - 8x^3 + 6x^5 - 16x$ in standard form. Then, identify the leading coefficient, degree, and number of terms. Name the polynomial.
   \[ A \ 6x^5 + 7x^4 + x^3 - 8x^2 - 16x - 6 \quad \text{leading coefficient: 6; degree: 5; number of terms: 6; name: quintic polynomial} \]
   \[ B \ -6 - 16x + x^3 + 7x^4 - 8x^3 + 6x^5 \quad \text{leading coefficient: -6; degree: 0; number of terms: 6; name: quintic polynomial} \]
   \[ C \ -6 - 16x + x^3 - 8x^3 + 7x^4 + 6x^5 \quad \text{leading coefficient: -6; degree: 0; number of terms: 6; name: quintic polynomial} \]
   \[ D \ 6x^5 + 7x^4 - 8x^3 + x^2 - 16x - 6 \quad \text{leading coefficient: 6; degree: 5; number of terms: 6; name: quintic polynomial} \]

56) Find the product $-2r^5 (-r^4 s^5 + 4 s^2)$.
   \[ A \ -3r^9 s^5 + 2r^3 s^2 \quad B \ 2r^{20} - 8 \quad C \ 2r^9 s^5 - 8r^5 s^2 \quad D \ -2r^{10} s^6 - 2r^6 s^3 \]

57) Find the product $(3x - 4y)^3$.
   \[ A \ 27x^3 + 108x^3 y + 144x^3 y^2 + 64y^3 \quad B \ 27x^3 + 64y^3 \quad C \ 27x^3 - 64y^3 \quad D \ 27x^3 - 108x^3 y + 144x^3 y^2 - 64y^3 \]

58) Use Pascal’s Triangle to expand the expression $(6x - 3)^4$.
   \[ A \ 1296x^4 - 1944x^3 + 972x^2 - 162x + 81 \quad B \ 1296x^4 - 2592x^3 + 1944x^2 - 648x + 81 \]
   \[ C \ 1296x^4 - 648x^3 + 324x^2 - 162x + 81 \quad D \ 104976x^4 - 23328x^3 + 1944x^2 - 72x + 3 \]

59) Divide by using synthetic division.
   \[ (6x^2 - 9x + 8) \div (x - 2) \]
   \[ A \ 6x + 3 + \frac{14}{x-2} \quad B \ 6x - 21 + \frac{50}{x-2} \quad C \ 6x - 6 + \frac{5}{x-2} \quad D \ 12x - 18 + \frac{8}{x-2} \]

60) Use synthetic substitution to evaluate the polynomial $P(x) = x^3 - 4x^2 + 2x - 9$ for $x = 4$.
   \[ A \ P(4) = -65 \quad B \ P(4) = -1 \quad C \ P(4) = 145 \quad D \ P(4) = -145 \]

61) Graph the function $f(x) = x^3 + 5x^2 + 3x + 4$. 

18
62) Add. Write your answer in standard form.
\((2b^5 - b) + (b^5 + 8b - 1)\)
A \(3b^5 + 7b - 1\)  B \(3b^{10} + 7b^2 - 1\)  C \(2b^5 + 8b - 1\)  D \(3b^5 + 7b\)

63) For \(h(x) = 2x^2 + 6x - 9\) and \(k(x) = 3x^2 - 8x + 6\), find \(h(x) - 2k(x)\).
A \(-4x^2 + 22x - 25\)  B \(-4x^2 - 14x + 17\)  C \(-4x^2 + 14x - 17\)  D \(-4x^2 - 22x + 25\)

64) Determine whether the binomial \((x - 4)\) is a factor of the polynomial \(P(x) = 5x^3 - 20x^2 - 5x + 20\).
A \((x - 4)\) is not a factor of the polynomial \(P(x) = 5x^3 - 20x^2 - 5x + 20\).  B \((x - 4)\) is a factor of the polynomial \(P(x) = 5x^3 - 20x^2 - 5x + 20\).  C Cannot determine.

65) Factor \(x^3 + 5x^2 - 9x - 45\).
A \((x - 5)(x^2 + 9)\)  B \((x - 5)(x - 3)(x + 3)\)  C \((x + 5)(x - 3)(x + 3)\)  D \((x + 5)(x^2 + 9)\)
66) Identify all of the real roots of \(4x^4 + 31x^3 - 4x^2 - 89x + 22 = 0\).
   A \(-2\) and \(\frac{1}{4}\)  B \(-2, \frac{1}{4}, -3 + 2\sqrt{5}, -3 - 2\sqrt{5}\)  C \(\pm 1, \pm \frac{1}{2}, \pm \frac{1}{4}\)  D \(-2, \frac{1}{4}, 3 + 2\sqrt{5}, 3 - 2\sqrt{5}\)

67) Write the simplest polynomial function with the zeros \(2 - i, \sqrt{5},\) and \(-2\).
   A \(P(x) = x^5 - 2x^4 - 5x^3 + 20x^2 + 15x - 50 = 0\)  B \(P(x) = x^5 - 2x^4 - 10x^3 + 16x^2 + 25x - 30 = 0\)  C \(P(x) = x^5 - 2x^4 - 5x^3 - 20x^2 - 65x - 50 = 0\)  D \(P(x) = x^6 - 4x^5 - 4x^4 + 36x^3 - 25x^2 - 80x + 100 = 0\)
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Answer Section

MULTIPLE CHOICE

1) ANS: C  REF: Page 9  OBJ: 1-1.3 Translating Between Methods of Set Notation
2) ANS: C  REF: Page 14  OBJ: 1-2.1 Finding Inverses
3) ANS: B  REF: Page 15  OBJ: 1-2.2 Identifying Properties of Real Numbers
4) ANS: C  REF: Page 23  OBJ: 1-3.3 Rationalizing the Denominator
5) ANS: B  REF: Page 28  OBJ: 1-4.3 Simplifying Expressions
6) ANS: C  REF: Page 35  OBJ: 1-5.2 Simplifying Expressions with Negative Exponents
7) ANS: B  REF: Page 36  OBJ: 1-5.3 Using Properties of Exponents to Simplify Expressions
8) ANS: A  REF: Page 36  OBJ: 1-5.4 Simplifying Expressions Involving Scientific Notation
9) ANS: D  REF: Page 53  OBJ: 1-7.3 Application
10) ANS: D  REF: Page 105  OBJ: 2-3.1 Recognizing Linear Functions
11) ANS: A  REF: Page 106  OBJ: 2-3.2 Graphing Lines Using Slope and a Point
12) ANS: D  REF: Page 106  OBJ: 2-3.3 Graphing Lines Using the Intercepts
13) ANS: A  REF: Page 117  OBJ: 2-4.3 Writing Equations of Lines
14) ANS: B  REF: Page 108  OBJ: 2-3.5 Graphing Vertical and Horizontal Lines
15) ANS: A  REF: Page 127  OBJ: 2-5.4 Solving and Graphing Linear Inequalities
16) ANS: A  REF: Page 134  OBJ: 2-6.1 Translating and Reflecting Linear Functions
17) ANS: D  REF: Page 152  OBJ: 2-8.3 Solving Absolute-Value Inequalities with Disjunctions
19) ANS: A  REF: Page 142  OBJ: 2-7.1 Application
20) ANS: D  REF: Page 159  OBJ: 2-9.2 Translations of an Absolute-Value Function
21) ANS: C  REF: Page 184  OBJ: 3-1.3 Classifying Linear Systems
22) ANS: B  REF: Page 185  OBJ: 3-1.4 Application
23) ANS: A  REF: Page 205  OBJ: 3-4.1 Graphing a Feasible Region
24) ANS: B  REF: Page 215  OBJ: 3-5.2 Graphing Linear Equations in Three Dimensions
25) ANS: A
26) ANS: A  REF: Page 199  OBJ: 3-3.1 Graphing Systems of Inequalities
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28) ANS: A  REF: Page 182  OBJ: 3-1.1 Verifying Solutions of Linear Systems
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