

Name:

Date Due:

Intermediate Algebra

Chapter 2-B Homework

Be sure to show all work! Use pencil.

PROBLEMS

ANSWERS

<p>Solve the equation.</p> <p>1. $\frac{2z + 7 + 1}{8} - 2 = z + \frac{z - 1}{2}$</p>	<p>1.</p>
<p>2. Write an equation to support your answer.</p> <p>The length of a rectangle sign is 2 feet less than three times its width. Find the dimensions if the perimeter is 28 feet</p>	<p>2.</p>
<p>3. Write an equation to support your answer.</p> <p>For the 2001 Major League Baseball season, the opening day payroll for the Minnesota Twins was \$46,718,000 less than the opening day payroll for the Colorado Rockies. The total opening day payrolls for these two teams was \$95,418,000. What was the opening day payroll for each team?</p>	<p>3.</p>
<p>4. $T = 3vs - 4ws + 5vw$ Solve for v.</p>	<p>4.</p>
<p>Solve. Write the solution in interval notation and graph.</p> <p>5. $\frac{3}{5}(x + 1) \leq x + 1$</p>	<p>5.</p> <p>graph _____</p>

<p>Solve. Graph the solution set. Write in interval notation.</p> <p>6. $\frac{3}{8}x + 1 \leq 0$ or $-2x < -4$</p>	<p>6.</p> <p>graph _____</p>
<p>Solve the absolute value equation.</p> <p>7. $3 + 6n = 4n + 11$</p>	<p>7.</p>
<p>For problems 8-9, solve the inequality and graph the solution set.</p> <p>8. $\left \frac{6(3+x)}{5} \right \leq 4$</p>	<p>8.</p> <p>graph _____</p>
<p>9. $6x - 13 \geq -7$</p>	<p>9.</p> <p>graph _____</p>
<p>10. Write an inequality to support your answer.</p> <p>In the Winter Olympics speed skating event, Hans scored times of 3.52, 4.04 and 3.87 minutes on his first three trials. Find the maximum time he can score on his last trial so that his average time is <i>under</i> 4.0 minutes.</p>	<p>10.</p>

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Ch 3-4 Homework

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PROBLEMS

ANSWERS

<p>Determine if $(-5, -1)$ is a solution to the following equation.</p> <p>1. $-2x + 5y = 10$</p>	1.
<p>For problems 2 and 3, solve the function for each of the numbers given.</p> <p>$g(x) = 2.7x^2 + 6.8x - 10.2$</p> <p>2. $g(1)$</p>	2.
<p>3. $g(7.2)$</p>	3.
<p>Graph the following using a "t" chart. Use three points.</p> <p>4. $-x + y = -3$</p>	4.
<p>5. Find the equation of the line. Write the equation in standard form of a line.</p> <p>Through $(2, -8)$ and $(-4, -3)$</p>	5.

<p>Find the equation of the line. Write in standard form of a line.</p> <p>6. through $(-2, -3)$: Perpendicular to $3x + 2y = 5$</p>	6.
<p>Find the equation of the line passing through the given points. Use function notation to write the equation.</p> <p>7. $(-9, -2), (-3, 10)$</p>	7.
<p>Graph the inequality.</p> <p>8. $3x + y > 4$</p>	8.
<p>Solve the system by graphing.</p> <p>9. $\begin{cases} 4x - y = 6 \\ x - y = 0 \end{cases}$</p>	9.
<p>10. Solve the system using the elimination method.</p> $\begin{cases} 6x - 3y = -3 \\ 4x + 5y = -9 \end{cases}$	10.

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Chapter 5 Homework

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PROBLEMS

ANSWERS

<p>For problems 1-2, simplify. Write without negative exponents.</p> <p>1. $\frac{(30z^2)(z^5)}{55z^{-4}}$</p>	1.
<p>2. $\frac{7^{-1}a^{-3}b^5}{a^2b^{-2}}$</p>	2.
<p>3. Perform the indicated operations. Write in scientific notation.</p> $\frac{0.00072 \times 0.003}{0.00024}$	3.
<p>For problems 4-9, perform the indicated operation.</p> <p>4. $(3x^2 + 6xy + 3y^2) - (8x^2 - 6xy - y^2)$</p>	4.
<p>5. $(2x - 1)(5x^2 - x - 2)$</p>	5.

<p>6. If $f(x) = x^2 - 3x$, find $f(a + 5)$.</p>	<p>6.</p>
<p>Factor by grouping.</p> <p>7. $4x^2 + 2xy - 10x - 5y$</p>	<p>7.</p>
<p>Factor</p> <p>8. $(3x - 1)^2 + 5(3x - 1) + 6$</p>	<p>8.</p>
<p>Factor.</p> <p>9. $32x^3 - 4y^3$</p>	<p>9.</p>
<p>10. Write an equation to support your answer.</p> <p>A gardener has a rose garden that measures 30 feet by 20 feet. He wants to put a uniform border of pine bark around the outside of the garden. Find how wide the border should be if he has enough pine bark to cover 336 square feet.</p>	<p>10.</p>

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Chapter 6 Homework

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For problems 1-2, perform the operations as indicated.

1.
$$\frac{4a + 36}{a^2 - 7a - 18} \div \frac{a^2 - a - 6}{a^2 - 81}$$

1.

2.
$$\frac{x + 2}{x^2 - 2x - 3} + \frac{x}{x - 3} - \frac{4}{x + 1}$$

2.

3. Simplify the complex fraction.

$$\frac{\frac{5}{x^2} - \frac{2}{x}}{\frac{1}{x} + 2}$$

3.

4. Divide: $(2x^2 + 13x + 5) \div (2x + 3)$

4.

For problem 5-7, solve the equation.

5.
$$\frac{x + 2}{x^2 + 7x + 10} = \frac{1}{3x + 6} - \frac{1}{x + 5}$$

5.

<p>6. $\frac{1}{x-4} = \frac{8}{x^2-16}$</p>	<p>6.</p>
<p>7. $s = \frac{a_1 - a_n r}{1 - r}$ for a_1</p>	<p>7.</p>
<p>For problems 8-10, be sure to write an equation to support your answer.</p> <p>8. One hose can fill a goldfish pond in 45 minutes, and two hoses can fill the same pond in 20 minutes. Find how long it takes the second hose alone to fill the pond</p>	<p>8.</p>
<p>9. A plane flies 465 miles with the wind and 365 miles against the wind in the same length of time. If the speed of the wind is 20 mph, find the speed of the plane in still air.</p>	<p>9.</p>
<p>10. If a number is subtracted from the numerator of $\frac{13}{8}$ and added to the denominator of $\frac{13}{8}$, the resulting fraction is equivalent to $\frac{2}{5}$. Find the number.</p>	<p>10.</p>

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Chapter 7 Homework

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PROBLEMS

ANSWERS

For problems 1-2, perform the operations as indicated.

1. $\sqrt[3]{-8a^{21}b^6}$

1.

2. If $f(x) = \sqrt{2x+3}$, find $f(-1)$.

2.

Multiply

3. $\left(y^{\frac{1}{2}} + 5\right)\left(y^{\frac{1}{2}} + 5\right)$

3.

Use the quotient rule to divide. Then simplify if possible.

4. $\frac{\sqrt[5]{64x^{10}y^3}}{\sqrt[5]{2x^3y^{-7}}}$

4.

Subtract.

5. $\frac{\sqrt{99}}{5x} - \sqrt{\frac{44}{x^2}}$

5.

<p>Multiply.</p> <p>6. $(5\sqrt{3x} - \sqrt{y})(4\sqrt{x} + 1)$</p>	6.
<p>Rationalize the denominator.</p> <p>7. $\frac{4\sqrt{5} + \sqrt{2}}{2\sqrt{5} - \sqrt{2}}$</p>	7.
<p>Solve the equation.</p> <p>8. $\sqrt{x-2} + 3 = \sqrt{4x+1}$</p>	8.
<p>Multiply.</p> <p>9. $(6 + 2i)(6 - 2i)$</p>	9.
<p>Write the quotient in $a + bi$.</p> <p>10. $\frac{6-i}{2+i}$</p>	10.