

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Hour: \_\_\_\_\_

### Unit 1 Day 8: Solving 2 Step Equations

Focus Question: How do I solve a two step equation?

Math Faces Practice: Solve each problem to know what to draw on the face below.





$$\begin{array}{r} \textcircled{1} \quad 2x + 1 = 7 \\ \hline \downarrow \quad -1 \quad -1 \\ \hline \cancel{2x} \quad = \quad \frac{6}{2} \\ \hline \boxed{x = 3} \end{array}$$

$$\begin{array}{r} \textcircled{2} \quad 4x - 2 = 6 \\ \hline \downarrow \quad +2 \quad +2 \\ \hline \cancel{4x} \quad = \quad \frac{8}{4} \\ \hline \boxed{x = 2} \end{array}$$

$$\begin{array}{r} \textcircled{3} \quad -12x - 3 = -51 \\ \hline \quad \quad +3 \quad +3 \\ \hline -12x \quad = \quad -48 \\ \hline \quad \quad -12 \quad -12 \\ \hline \boxed{x = 4} \end{array}$$

$$\begin{array}{r} \textcircled{4} \quad 14 = 11x + 3 \\ \hline \quad \quad -3 \quad -3 \\ \hline 11 \quad = \quad 11x \\ \hline \quad \quad 11 \quad 11 \\ \hline \boxed{1 = x} \end{array}$$

$$\begin{array}{r} \textcircled{5} \quad -6 + 8x = -38 \\ \hline +6 \quad \quad +6 \\ \hline 8x \quad = \quad -32 \\ \hline \quad \quad 8 \quad 8 \\ \hline \boxed{x = -4} \end{array}$$

$$\begin{array}{r} \textcircled{6} \quad 3 + 6x = 45 \\ \hline -3 \quad \quad -3 \\ \hline 6x \quad = \quad 42 \\ \hline \quad \quad 6 \quad 6 \\ \hline \boxed{x = 7} \end{array}$$

$$\begin{array}{r} \textcircled{7} \quad 3x - 10 = -1 \\ \hline \quad \quad +10 \quad +10 \\ \hline 3x \quad = \quad 9 \\ \hline \quad \quad 3 \quad 3 \\ \hline \boxed{x = 3} \end{array}$$

$$\begin{array}{r} \textcircled{8} \quad 25 = 25 + 5x \\ \hline -25 \quad -25 \\ \hline 0 \quad = \quad 5x \\ \hline \quad \quad 5 \quad 5 \\ \hline \boxed{0 = x} \end{array}$$



$$\begin{array}{r|l} \textcircled{9} & -2 + 6x = 16 \\ +2 & +2 \\ \hline & 6x = 18 \\ \frac{6x}{6} & \frac{18}{6} \\ \hline & x = 3 \end{array}$$

$$\begin{array}{r|l} \textcircled{10} & 2 + 7x = 65 \\ -2 & -2 \\ \hline & 7x = 63 \\ \frac{7x}{7} & \frac{63}{7} \\ \hline & x = 9 \end{array}$$










































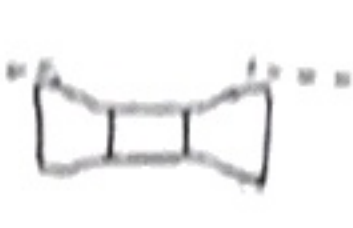

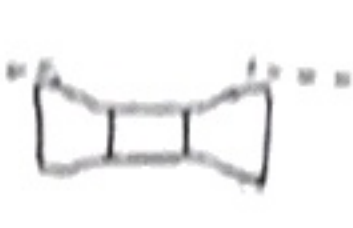





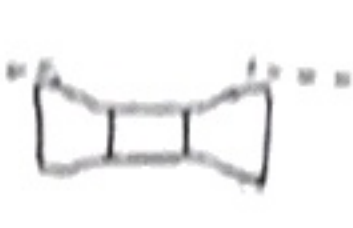













$$\begin{array}{r|l} \textcircled{11} & 20 = 14x - 8 \\ +8 & +8 \\ \hline & 28 = 14x \\ \frac{28}{14} & \frac{14x}{14} \\ \hline & 2 = x \end{array}$$

$$\begin{array}{r|l} \textcircled{12} & 2x + 7 = -15 \\ -7 & -7 \\ \hline & 2x = -22 \\ \frac{2x}{2} & \frac{-22}{2} \\ \hline & x = -11 \end{array}$$



## Lesson 4: Solving Two-Step Equations using Addition, Subtraction, Multiplication, and Division

Directions: Solve each equation and use a pencil to DRAW the object that corresponds with your answer. SHOW YOUR STEPS!!!

<p>1. <math>2x + 1 = 7</math></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 70%; padding: 2px;">(a) If your answer is <math>x = 3</math> draw the following ears.</td> <td style="width: 30%; text-align: center; padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">(b) If your answer is <math>x = 4</math> draw the following ears.</td> <td style="text-align: center; padding: 2px;"></td> </tr> </tbody> </table>	(a) If your answer is $x = 3$ draw the following ears.		(b) If your answer is $x = 4$ draw the following ears.		<p>2. <math>4x - 2 = 6</math></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 70%; padding: 2px;">(a) If your answer is <math>x = 8</math> draw a small patch of hair on the top of the head.</td> <td style="width: 30%; text-align: center; padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">(b) If your answer is <math>x = 2</math> draw a small patch of hair above each of the ears.</td> <td style="text-align: center; padding: 2px;"></td> </tr> </tbody> </table>	(a) If your answer is $x = 8$ draw a small patch of hair on the top of the head.		(b) If your answer is $x = 2$ draw a small patch of hair above each of the ears.		<p>3. <math>-12x - 3 = -51</math></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 70%; padding: 2px;">(a) If your answer is <math>x = 4</math> draw the following glasses and eyes.</td> <td style="width: 30%; text-align: center; padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">(b) If your answer is <math>x = -4</math> draw the following glasses and eyes.</td> <td style="text-align: center; padding: 2px;"></td> </tr> </tbody> </table>	(a) If your answer is $x = 4$ draw the following glasses and eyes.		(b) If your answer is $x = -4$ draw the following glasses and eyes.	
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<p>4. <math>14 = 11x + 3</math></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 70%; padding: 2px;">(a) If your answer is <math>x = 1</math> draw the following LARGE nose and mustache.</td> <td style="width: 30%; text-align: center; padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">(b) If your answer is <math>x = 11</math> draw the following LARGE nose and mustache.</td> <td style="text-align: center; padding: 2px;"></td> </tr> </tbody> </table>	(a) If your answer is $x = 1$ draw the following LARGE nose and mustache.		(b) If your answer is $x = 11$ draw the following LARGE nose and mustache.		<p>5. <math>-6 + 8x = -38</math></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 70%; padding: 2px;">(a) If your answer is <math>x = 4</math> draw the following skinny eyebrows.</td> <td style="width: 30%; text-align: center; padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">(b) If your answer is <math>x = -4</math> draw the following bushy eyebrows.</td> <td style="text-align: center; padding: 2px;"></td> </tr> </tbody> </table>	(a) If your answer is $x = 4$ draw the following skinny eyebrows.		(b) If your answer is $x = -4$ draw the following bushy eyebrows.		<p>6. <math>3 + 6x = 45</math></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 70%; padding: 2px;">(a) If your answer is <math>x = 8</math> draw two wrinkle lines on the forehead.</td> <td style="width: 30%; text-align: center; padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">(b) If your answer is <math>x = 7</math> draw three wrinkle lines on the forehead.</td> <td style="text-align: center; padding: 2px;"></td> </tr> </tbody> </table>	(a) If your answer is $x = 8$ draw two wrinkle lines on the forehead.		(b) If your answer is $x = 7$ draw three wrinkle lines on the forehead.	
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<p>7. <math>3x - 10 = -1</math></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 70%; padding: 2px;">(a) If your answer is <math>x = 3</math> draw two wrinkle lines on each cheek.</td> <td style="width: 30%; text-align: center; padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">(b) If your answer is <math>x = -3</math> draw three wrinkle lines on each cheek.</td> <td style="text-align: center; padding: 2px;"></td> </tr> </tbody> </table>	(a) If your answer is $x = 3$ draw two wrinkle lines on each cheek.		(b) If your answer is $x = -3$ draw three wrinkle lines on each cheek.		<p>8. <math>25 = 25 + 5x</math></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 70%; padding: 2px;">(a) If your answer is <math>x = 0</math> draw a necktie on the shirt.</td> <td style="width: 30%; text-align: center; padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">(b) If your answer is <math>x = 1</math> draw a bow tie on the shirt.</td> <td style="text-align: center; padding: 2px;"></td> </tr> </tbody> </table>	(a) If your answer is $x = 0$ draw a necktie on the shirt.		(b) If your answer is $x = 1$ draw a bow tie on the shirt.		<p>9. <math>-2 + 6x = 16</math></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 70%; padding: 2px;">(a) If your answer is <math>x = 3</math> write the scientific term for water (<math>H_2O</math>) on the shirt.</td> <td style="width: 30%; text-align: center; padding: 2px;"><math>H_2O</math></td> </tr> <tr> <td style="padding: 2px;">(b) If your answer is <math>x = 2</math> draw a pencil coming out of a pocket on the shirt.</td> <td style="text-align: center; padding: 2px;"></td> </tr> </tbody> </table>	(a) If your answer is $x = 3$ write the scientific term for water ( $H_2O$ ) on the shirt.	$H_2O$	(b) If your answer is $x = 2$ draw a pencil coming out of a pocket on the shirt.	
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<p>10. <math>2 + 7x = 65</math></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 70%; padding: 2px;">(a) If your answer is <math>x = 9</math> draw a light bulb above the head.</td> <td style="width: 30%; text-align: center; padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">(b) If your answer is <math>x = 8</math> draw a broken light bulb above the head.</td> <td style="text-align: center; padding: 2px;"></td> </tr> </tbody> </table>	(a) If your answer is $x = 9$ draw a light bulb above the head.		(b) If your answer is $x = 8$ draw a broken light bulb above the head.		<p>11. <math>20 = 14x - 8</math></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 70%; padding: 2px;">(a) If your answer is <math>x = 2</math> draw a science beaker with bubbling liquid.</td> <td style="width: 30%; text-align: center; padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">(b) If your answer is <math>x = -2</math> draw a science beaker on fire.</td> <td style="text-align: center; padding: 2px;"></td> </tr> </tbody> </table>	(a) If your answer is $x = 2$ draw a science beaker with bubbling liquid.		(b) If your answer is $x = -2$ draw a science beaker on fire.		<p>12. <math>2x + 7 = -15</math></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 70%; padding: 2px;">(a) If your answer is <math>x = -4</math> write the formula <math>A = \frac{1}{2}bh</math> on the background.</td> <td style="width: 30%; text-align: center; padding: 2px;"><math>A = \frac{1}{2}bh</math></td> </tr> <tr> <td style="padding: 2px;">(b) If your answer is <math>x = -11</math> write the formula <math>E = mc^2</math> on the background.</td> <td style="text-align: center; padding: 2px;"><math>E = mc^2</math></td> </tr> </tbody> </table>	(a) If your answer is $x = -4$ write the formula $A = \frac{1}{2}bh$ on the background.	$A = \frac{1}{2}bh$	(b) If your answer is $x = -11$ write the formula $E = mc^2$ on the background.	$E = mc^2$
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