

Mathematics Preparation For High School Chemistry
Isolation Of Variables

Student Examples

1. $x + 7 = 24$

2. $x - 14 = 9$

3. $3x = 65$

4. $12 = x/7$

5. $.35 = 3(5x + 17)$

6. $(x/.8) + 7 = 16 + 4x$

Student Problems

1. $x + 18 = 590$

2. $x - 23 = 56$

3. $35x = 12.9$

4. $62 = x/3.5$

5. $500 = 2(12x - 49)$

6. $7x + 15 = 4x - 5$

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Isolation Of Variables

Student Examples

1. $x + 7 = 24$

$$x + 7 - 7 = 24 - 7$$

$$x = 17$$

2. $x - 14 = 9$

$$x - 14 + 14 = 9 + 14$$

$$x = 23$$

3. $3x = 65$

$$\frac{3x}{3} = \frac{65}{3} \quad x = 21.7$$

4. $12 = x/7$

$$(12)(7) = \left(\frac{x}{7}\right)(7)$$

$$x = 84$$

5. $.35 = 3(5x + 17)$

$$.35 = 15x + 51$$

$$-50.65 = 15x$$

$$x = -3.4$$

6. $(x/.8) + 7 = 16 + 4x$

$$\frac{x}{.8} = 9 + 4x$$

$$x = 7.2 + 3.2x$$

$$x = -3.27$$

Student Problems

1. $x + 18 = 590$

$$x = 572$$

2. $x - 23 = 56$

$$x = 79$$

3. $35x = 12.9$

$$x = .36$$

4. $62 = x/3.5$

$$x = 217$$

5. $500 = 2(12x - 49)$

$$x = 24.9$$

6. $7x + 15 = 4x - 5$

$$x = -3\frac{1}{3}$$