1 **Write an equation that says what these sentences say.**

To trim the edges of a rectangular tablecloth, 42 feet of lace are needed. The width of the tablecloth is exactly one-half its length.

$$x + x + \tfrac{1}{2}x + \tfrac{1}{2}x = 42$$

Yes I think I got the equation right.

No I don't think I got the equation right.

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2 **What is the length, in feet, of the tablecloth?**

To trim the edges of a rectangular tablecloth, 42 feet of lace are needed. The width of the tablecloth is exactly one-half its length.

$$x + x + \tfrac{1}{2}x + \tfrac{1}{2}x = 42$$

$$\frac{3x}{3} = \frac{42}{3}$$

$$x = 14$$

Length: x L

Width: $\frac{1}{2}x$ $w = \frac{1}{2}L$

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3 **Write an equation that says what these sentences say.**

A 10-ft. board is cut into 2 pieces so that one piece is 2 feet longer than 3 times the shorter piece.

$$x + (3x + 2) = 10$$

Yes I think I got the equation right.

No I don't think I got the equation right.

x – short piece

$3x+2$ – long piece

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4 **How long is the shorter piece?**

A 10-ft. board is cut into 2 pieces so that one piece is 2 feet longer than 3 times the shorter piece.

$$x + (3x + 2) = 10$$

$x + 3x + 2 = 10$

$4x + 2 = 10$

$\frac{4x}{4} = \frac{8}{4}$

$x = 2$

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5 **Write an equation that says what these sentences say.**

Center City East Parking Garage has a capacity of 258 cars more than Center City West Parking Garage. The combined capacity for the two garages is 1228 cars.

$x + (x + 258) = 1228$

Yes I think I got the equation right.

No I don't think I got the equation right.

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6 **What is the capacity of Center City East?**

Center City East Parking Garage has a capacity of 258 cars more than Center City West Parking Garage. The combined capacity for the two garages is 1228 cars.

$x + (x + 258) = 1228$

$2x + 258 = 1228$

$\frac{2x}{2} = \frac{970}{2}$

$x = 485$ ← West

$x + 258 = 743$ ← East

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7 **Write an equation that says what these sentences say.**

Mary and her brother John collect foreign coins. Mary has four times the number of coins that John has. Together they have 150 foreign coins.

$x + 4x = 150$

Yes I think I got the equation right.

No I don't think I got the equation right.

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8 How many coins does Mary have?

Mary and her brother John collect foreign coins. Mary has four times the number of coins that John has. Together they have 150 foreign coins.

$x + 4x = 150$

$x = 30$

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9 **Write an equation that says what these sentences say.**

In a recent International Gymnastics competition, the U.S., China, and Romania were the big winners. The total number of medals won by each team are three consecutive integers whose sum is 84 and the U.S. won more than China who won more than Romania.

$x + (x + 1) + (x + 2) = 84$

Yes I think I got the equation right.

No I don't think I got the equation right.

$x \quad x+1 \quad x+2$

$7, 8, 9 \qquad 13, 14, 15$

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10 **How many medals did China win?**

In a recent International Gymnastics competition, the U.S., China, and Romania were the big winners. The total number of medals won by each team are three consecutive integers whose sum is 84 and the U.S. won more than China who won more than Romania.

$x + (x + 1) + (x + 2) = 84$

$3x+3 = 84$

$\frac{3x}{3} = \frac{81}{3}$

$x = 27$ ← Romania

$x+1 = 28$ ← China

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11 Write an equation that says what these sentences say.

The house numbers of two adjacent homes are two consecutive even numbers. Their sum is 346.

$x + (x + 2) = 346$

Yes I think I got the equation right.

No I don't think I got the equation right.

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12 What is the smaller house number?

The house numbers of two adjacent homes are two consecutive even numbers. Their sum is 346.

$x + (x + 2) = 346$

$2x + 2 = 346$

$\frac{2x}{2} = \frac{344}{2}$

$x = 172$

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13 Write an equation that says what these sentences say.

The code to unlock a safety deposit box is three consecutive odd integers whose sum is 87.

$x + (x + 2) + (x + 4) = 87$

Yes I think I got the equation right.

No I don't think I got the equation right.

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14 What is the largest code number?

The code to unlock a safety deposit box is three consecutive odd integers whose sum is 87.

$x + (x + 2) + (x + 4) = 87$

$3x + 6 = 87$

$3x + 6 + -6 = 87 + -6$

$\frac{3x}{3} = \frac{81}{3}$

$x = 27$ ← smallest number

$x + 4 = 31$ ← largest number

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