

Name: Key

1. Find three consecutive even integers whose sum is 72.

$$\overline{x} + \overline{x+2} + \overline{x+4} = 72$$

$$\begin{array}{r} 3x + 6 = 72 \\ -6 \quad -6 \\ \hline \end{array}$$

$$3x = 66 \quad x = 22$$

$$\boxed{22, 24, 26}$$

2. Find four consecutive odd integers whose sum is 56.

$$\overline{x} + \overline{x+2} + \overline{x+4} + \overline{x+6} = 56$$

$$\begin{array}{r} 4x + 12 = 56 \\ -12 \quad -12 \\ \hline \end{array}$$

$$4x = 44$$

$$x = 11$$

$$\boxed{11, 13, 15, 17}$$

3. The perimeter of a triangle is 51 centimeters. The lengths of its sides are consecutive odd integers. Find the lengths of all three sides.

$$\overline{x} + \overline{x+2} + \overline{x+4} = 51$$

$$\begin{array}{r} 3x + 6 = 51 \\ -6 \quad -6 \\ \hline \end{array}$$

$$3x = 45$$

$$x = 15$$

$$\boxed{15, 17, 19}$$

4. The zoo offers a special rate for schools. For \$100 a class of 20 students can attend. Each additional student costs \$7.00. How much will it cost for a class of 29 students?

$$\boxed{100 + 7(x-20)}$$

↓
20 students

$$100 + 7(29-20)$$

$$100 + 7(9)$$

$$\boxed{\$163 \text{ for } 29 \text{ students}}$$

5. Pest Away Company charges \$55 for the first three home visits to get rid of spiders and creepy crawler bugs. After that, it costs a homeowner \$30 for each additional visit. If Michael paid \$325, how many visits did Pest Away Company come to Michael's house?

$$\boxed{55 + 30(x-3) = 325}$$

↓
3 visits

$$\begin{array}{r} 55 + 30(x-3) = 325 \\ -55 \quad -55 \\ \hline \end{array}$$

$$30(x-3) = 270$$

$$\begin{array}{r} 30x - 90 = 270 \\ +90 \quad +90 \\ \hline \end{array}$$

$$30x = 360$$

$$\boxed{x = 12 \text{ visits}}$$