

Modeling w/ Linears

ex1 Write $\frac{x-7}{2}$ in words
take a number subtract 7, then divide by 2

ex2 The sum of two consecutive natural #s is 73. Solve for the #s.

#1: x

#2: $x+1$

$$x + (x+1) = 73$$

$$2x + 1 = 73$$

$$2x = 72$$

$$x = 36$$

$$\boxed{36 \text{ \& } 37}$$

ex3 Your salary is \$32,300. You are ^{paid} twice a month with 1 \$500 bonus. How much is each paycheck?

$$32300 = 24x + 500$$

$$31800 = 24x$$

$$\boxed{\$1325 = x}$$

Percentages

$$\frac{\text{is}}{\text{of}} = \frac{\text{percent}}{100}$$

ex1 20 is 15% of what?

$$\frac{20}{x} = \frac{15}{100} \rightarrow \frac{2000 = 15x}{\boxed{1333.33 = x}}$$

ex2 What % is 17 of 94?

$$\frac{17}{94} = \frac{x}{100}$$

$$1700 = 94x$$

$$\boxed{18.09 = x}$$

ex3 What is 90% of 205?

$$\frac{x}{205} = \frac{90}{100}$$

$$100x = 18450$$

$$\boxed{x = 184.5}$$

ex4 Your paycheck is 20% more than your friends. Together they are \$1700. Find your paycheck.

$$1.2x + x = 1700$$

$$2.2x = 1700$$

$$x = 772.73$$

$$\boxed{\$927.27}$$