

8. Mary has \$1000 deductible collision insurance. She backs her car into a mailbox and causes \$3400 worth of damage to her car. How much will:

Mary have to pay: \$1000

Insurance have to pay: \$2400

9. Keith ran his car into a telephone pole that had a bicycle leaning against it which was also damaged. The pole will cost \$3800 to fix, the bicycle will cost \$1300 to replace, and there was \$4100 damage to his car. If he has \$10,000 liability insurance, how much of the damage will Keith have to pay himself?

TOTAL DAMAGES:
$$= \$3800 + \$1300 + \$4100$$
$$= \$9200$$

HIS \$10,000 INSURANCE WILL COVER ALL OF IT.

10. Joan has 50/100 BI liability insurance. She gets into an accident with a bus, causing injury to 28 people, and each person is awarded \$10,000 as a result of a lawsuit. How much will:

The insurance company pay each person: 10,000

The insurance company pay total: _____

Joan pay (total): _____

\$ 50,000 MAX FOR ANY INDIVIDUAL,
\$ 100,000 MAX TOTAL

$$28 * 10,000 =$$
$$\$280,000$$

TOTAL

11. You buy a car for \$32,000. Two years later, it is worth \$24,000.

a) What is its rate of depreciation?

POINTS: $(0, 32,000)$ AND $(2, 24,000)$
 $x_1 \quad y_1 \quad x_2 \quad y_2$

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{24,000 - 32,000}{2 - 0} = \frac{-8,000}{2} = \boxed{-4,000}$$

\$4,000 LOSS
PER YEAR

b) What is the depreciation equation?

$$y = -4,000x + 32,000 \quad \leftarrow \text{STARTING VALUE}$$

c) Use your depreciation equation to determine the car's worth in 5 years.

$$\begin{aligned} y &= -4,000(5) + 32,000 \\ &= -20,000 + 32,000 \\ &= \boxed{\$12,000} \end{aligned}$$

12. The straight line depreciation equation for a car is $y = -3,400x + 85,000$.

a) What is the original price of the car?

$$\boxed{\$85,000}$$

b) How much value does the car lose per year?

$$\boxed{\$3,400}$$

c) How much is the car worth after 3 years?

$$\begin{aligned} y &= -3,400(3) + 85,000 \\ &= -10,200 + 85,000 \\ &= \boxed{\$74,800} \end{aligned}$$

13. The exponential depreciation equation for a car is $y = 26,600 \times 0.945^x$. What is the car worth after 3 years?

$$\begin{aligned} y &= 26,600 * 0.945^3 \\ &= 26,600 * 0.844 \\ &= \boxed{\$22,449.6} \end{aligned}$$

14. A car is traveling at 74 mph when a deer jumps in front.

a) What is the approximate reaction distance?

$$\approx 74 \text{ ft}$$

b) What is the approximate braking distance?

$$\frac{74}{20} = 3.7 \text{ ft}$$

c) What is the approximate stopping distance?

$$74 + 3.7 = 77.7 \text{ ft}$$