

**1-6****Real-Life Career Activity*****Highway Department Purchaser***

Highway departments across the United States sow wildflowers alongside the highways for beautification. A highway department purchaser orders wildflower seeds from the supplier based on the number of acres of roadside the department plans to seed. A highway department purchaser can use the formula below to calculate the cost of buying wildflower seed using this table provided by a seed supplier.



Wildflower Seed	Pounds per Acre	Cost per Pound
yellow coneflower	3	\$20.00
cornflower	4	\$6.50
Indian blanket	10	\$20.00
yarrow	1	\$25.00
California poppy	8	\$17.00

$$T = apc$$

In this formula,  $T$  is the total cost of the seed,  $a$  is the number of acres to seed,  $p$  is the number of pounds of seed needed per acre, and  $c$  is the cost per pound of the seed.

Suppose a highway department purchaser orders enough yellow coneflower seed to cover 10 acres. How much will the seed cost?

$$\begin{aligned} T &= 10 \times 3 \times 20 \\ &= 600 \end{aligned}$$

The highway department will spend \$600 seeding 10 acres with yellow coneflowers.

***Solve.***

1. Calculate how much the highway department will spend buying California poppy seed for 3 acres.
2. The highway department wants to seed 4 acres. Would it be less expensive to use cornflower seed or yarrow seed?
3. How many acres will be covered with Indian blanket seed if the total cost of the seed is \$1,600?