## Pretest for Depreciation

1. You have started your own carpet company and bought the truck of your dreams—bright red, with the greatest company name in the world on the side. The truck costs $40000 and has an estimated salvage value of $5000 and you will only use it five years. Determine the value of the truck at the end of year three.

   \[
   \text{Original Cost} \times (100\% - \text{Depreciation Rate})^t
   \]
   
   \[
   t \text{ is time in years}
   \]
   
   \[
   40000 \times (1.00 - .40)^3
   \]
   
   \[
   40000 \times (.60)^3
   \]
   
   \[
   20000 \times (1.00 - .20)^9
   \]
   
   \[
   20000 \times (.80)^9
   \]
   
   \[
   20000 \times .1342177
   \]
   
   \[
   20000 \times .1342177
   \]

   $2684.35

2. You purchase a trailer to haul the carpet. The purchase price is 20,000. The trailer should last 10 years and have a salvage value of $500. What is the book value after 9 years?

   \[
   5,000 \times (1.00 - .40)^4
   \]

   \[
   5,000 \times (.60)^4
   \]

   \[
   5,000 \times .1296
   \]

   \[
   5,000 \times .1296
   \]

   $648, but salvage value is $1,500 so the answer is $1,500

3. Your company purchased a piece of equipment to expedite shipping your products. The purchase price was $5,000 and the useful life was estimated at 5 years. When you replace this piece of equipment, you should be able to resell it for $1,500. At the end of 4 years, you decide to purchase a replacement that reflects your changing customer base. What is the book value at the end of year 4?

   \[
   5,000 \times (1.00 - .40)^4
   \]

   \[
   5,000 \times (.60)^4
   \]

   \[
   5,000 \times .1296
   \]

   \[
   5,000 \times .1296
   \]

   $648, but salvage value is $1,500 so the answer is $1,500
## Posttest for Depreciation

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
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</table>
| 1. You have started your own carpet company and bought the truck of your | $30000 \cdot (1.00 - .50)^3 \\
| dreams—bright red, with the greatest company name in the world on the | $30000 \cdot (.50)^3 \\
| side. The truck costs $30,000 and has an estimated salvage value of $2, | $3750. |
| 500 and you will only use it four years. Determine the value of the truck at the end of year three. |
| 2. You purchase a trailer to haul the carpet. The purchase price is $15,000. | $15,000 \cdot (1.00 - .40)^4 \\
| The trailer should last 5 years and have a salvage value of $500. What is the book value after 4 years? | $15,000 \cdot (.60)^4 \\
| $1944. |
| 3. Your company purchased a piece of equipment to expedite shipping your  | $8,000 \cdot (1.00 - .40)^4 \\
| products. The purchase price was $8,000 and the useful life was estimated at 5 years. When you replace this piece of equipment, you should be able to resell it for $2,500. At the end of 4 years, you decide to purchase a replacement that reflects your changing customer base. What is the book value at the end of year 4? | $8,000 \cdot (.60)^4 \\
| $8,000 \cdot .1296 \\
| $1036.80 |
| **But** the salvage value is $2,500, so that is the book value. | |