Valuation of Personal Property and Fixtures
Using Assessors' Handbook Section 581
(Equipment Index, Percent Good, and Valuation Factors)

Appraisal Training: Self-Paced Online Learning Session

Lesson 2: Index Factors, Check Your Knowledge

Exercise 1

Determine the index factor to be used in estimating the reproduction cost new (RCN) of the following types of equipment and fixtures, as of lien date 2011 (January 1).

	Equipment & Fixtures	Acquisition Year	Index Factor
a.	Commercial	2007	
b.	Commercial	2005	
c.	Industrial	2006	
d.	Industrial	2004	
e.	Construction	2008	
f.	Construction	2003	
g.	Agricultural	2009	
h.	Agricultural	2002	

Solution:

a. **106** = 2011 AH 581 Table 1 (page 3), row: 2007 Year Acquired, column: "Average".
b. **116** = 2011 AH 581 Table 1 (page 3), row: 2005 Year Acquired, column "Average".
c. **108** = 2011 AH 581 Table 2 (page 8), row: 2006 Year Acquired, column "Average".
d. **115** = 2011 AH 581 Table 2 (page 8), row: 2004 Year Acquired, column "Average".
e. **103** = 2011 AH 581 Table 3 (page 10), row: 2008 Year Acquired, column "Construction".
f. **125** = 2011 AH 581 Table 3 (page 10), row: 2003 Year Acquired, column "Construction".
g. **102** = 2011 AH 581 Table 3 (page 10), row: 2009 Year Acquired, column "Agricultural".
h. **128** = 2011 AH 581 Table 3 (page 10), row: 2002 Year Acquired, column "Agricultural".

Exercise 2

What is the reproduction cost new (RCN), as of lien date 2011 (January 1), for retail department store equipment purchased and installed in 2006, for $250,000?

Solution:

- RCN = Cost × Index Factor (converted to decimal equivalent)
- RCN = $250,000 × 1.11
- RCN = $277,500

- Locate the index factor for commercial equipment with a 2006 acquisition year in Table 1 (page 3) of the January 2011 AH 581.

  2006 Year Acquired = 111

- Calculate the reproduction cost new (RCN) for the equipment by multiplying its acquisition cost by the decimal equivalent of the index factor (percent) found in the preceding step.

  RCN = $250,000 × 1.11 = $277,500

Exercise 3

What is the reproduction cost new (RCN), as of lien date 2011 (January 1), for a forklift purchased and delivered in 2010, for $25,000?

Solution:

- RCN = Cost × Index Factor (converted to decimal equivalent)
- RCN = $25,000 × 1.00
- RCN = $25,000

- Locate the index factor for commercial equipment with a 2010 acquisition year in Table 1 (page 3) of the January 2011 AH 581.

  2010 Year Acquired = 100

- Calculate the reproduction cost new (RCN) for the equipment by multiplying its acquisition cost by the decimal equivalent of the index factor (percent) found in the preceding step.

  RCN = $25,000 × 1.00 = $25,000

Exercise 4

What is the reproduction cost new (RCN), as of lien date 2011 (January 1), for furniture manufacturing equipment purchased and installed in 2002, for $250,000?

Solution:

- RCN = Cost × Index Factor (converted to decimal equivalent)
- RCN = $250,000 × 1.20
- RCN = $300,000

- Locate the index factor for industrial equipment with a 2002 acquisition year in Table 2 (page 8) of the January 2011 AH 581.

  2002 Year Acquired = 120

- Calculate the reproduction cost new (RCN) for the equipment by multiplying its acquisition cost by the decimal equivalent of the index factor (percent) found in the preceding step.

  RCN = $250,000 × 1.20 = $300,000

Exercise 5

What is the reproduction cost new (RCN), as of lien date 2011 (January 1), for sheet metal manufacturing equipment purchased and installed in 2009, for $750,000?

Solution:

- RCN = Cost × Index Factor (converted to decimal equivalent)
- RCN = $750,000 × 1.00
- RCN = $750,000

- Locate the index factor for industrial equipment with a 2009 acquisition year in Table 2 (page 8) of the January 2011 AH 581.

  2009 Year Acquired = 100

- Calculate the reproduction cost new (RCN) for the equipment by multiplying its acquisition cost by the decimal equivalent of the index factor (percent) found in the preceding step.

  RCN = $750,000 × 1.00 = $750,000

Exercise 6

What is the reproduction cost new (RCN), as of lien date 2011 (January 1), for a diesel fired heater (non-mobile construction equipment) purchased and delivered in 2006, for $30,000?

Solution:

- RCN = Cost × Index Factor (converted to decimal equivalent)
- RCN = $30,000 × 1.09
- RCN = $32,700

- Locate the index factor for construction equipment with a 2006 acquisition year in Table 3 (page 10) of the January 2011 AH 581.

  2006 Year Acquired = 109

- Calculate the reproduction cost new (RCN) for the equipment by multiplying its acquisition cost by the decimal equivalent of the index factor (percent) found in the preceding step.

  RCN = $30,000 × 1.09 = $32,700

Exercise 7

What is the reproduction cost new (RCN), as of lien date 2011 (January 1), for dairy farm equipment (non-mobile agricultural equipment) purchased and installed in 2007, for $85,000?

Solution:

- RCN = Cost × Index Factor (converted to decimal equivalent)
- RCN = $85,000 × 1.10
- RCN = $93,500

- Locate the index factor for agricultural equipment with a 2007 acquisition year in Table 3 (page 10) of the January 2011 AH 581.

  2007 Year Acquired = 110

- Calculate the reproduction cost new (RCN) for the equipment by multiplying its acquisition cost by the decimal equivalent of the index factor (percent) found in the preceding step.

  RCN = $85,000 × 1.10 = $93,500

Exercise 8

What is the reproduction cost new (RCN), as of lien date 2011 (January 1), for an excavator (non-mobile construction equipment) purchased new and delivered in 2001, for $250,000?

Solution:

- RCN = Cost × Index Factor (converted to decimal equivalent)
- RCN = $250,000 × 1.28
- RCN = $320,000

- Locate the index factor for construction equipment with a 2001 acquisition year in Table 3 (page 10) of the January 2011 AH 581.

  2001 Year Acquired = 128

- Calculate the reproduction cost new (RCN) for the equipment by multiplying its acquisition cost by the decimal equivalent of the index factor (percent) found in the preceding step.

  RCN = $250,000 × 1.28 = $320,000

Exercise 9

What is the reproduction cost new (RCN), as of lien date 2011 (January 1), for a farm sprayer (non-mobile agricultural equipment) purchased and delivered in 2003, for $62,500?

Solution:

- RCN = Cost × Index Factor (converted to decimal equivalent)
- RCN = $62,500 × 1.26
- RCN = $78,750

- Locate the index factor for agricultural equipment with a 2003 acquisition year in Table 3 (page 10) of the January 2011 AH 581.

  2003 Year Acquired = 126

- Calculate the reproduction cost new (RCN) for the equipment by multiplying its acquisition cost by the decimal equivalent of the index factor (percent) found in the preceding step.

  RCN = $62,500 × 1.26 = $78,750