

Exercise 16.11

Question

16.11 *Marian Haste*

Marian Haste is a painter under contract to paint the exterior of a building for \$225,000. Unfortunately for her, the outside temperature may drop below freezing. If it does, the paint will not stick well and may peel off. The paint may also peel off even if it does not freeze. Either way, Marian would have to repaint the building, at a cost of \$150,000.

The radio forecasts a 60% chance of freezing. Marian also believes there is a $\frac{1}{3}$ chance the paint may peel if it freezes, but a 10% chance if it does not. Her choices now are to go ahead and paint, or to defer until there is no chance of frost. Deferring the job would require her to pay \$30,000 in overtime and penalties. What would you advise Marian Haste to do? (For your own amusement, the question is should Marian Haste go ahead, and repaint at leisure?)

Solution from Manual

16.11 Marian Haste

Go Ahead	No Peel	0
	Repaint	- 150k
Defer	No Peel	- 30k
	Repaint	- 30 - 150k
P(Repaint / Go Ahead) = 0.4(0.1) + 0.6(1/3) = 0.24		
P(Repaint / Defer) = 1.0(0.1) + 0 (1/3) = 0.1		
EV(Go Ahead) = 0.24 (-150) = - 36k best choice		
EV(Defer) = 0.10 (-150) - 30 = - 45k		