Reading: Werner 06: Premium

W-06 (030) - (Problem 1)

Model: 2017.Fall #6

Problem Type: Direct Impact of Benefit Change

Find Calculate the direct effect of the state's proposed worker's compensation indemnity benefit change.

Given

State Avg Weekly Wage	1,500

<==== SAWW

Ratio to SAWW min	Ratio to SAWW max	# of workers	total weekly wages
0.0%	62.5%	150	108,750
62.5%	93.8%	100	110,000
93.8%	125.0%	95	137,750
125.0%	156.3%	50	87,500
156.3%	n/a	45	216,000
TOTAL		440	660,000

	current	proposed
% of wages compensation rate	80%	80%
min benefit as % of SAWW	50%	75%
MAX benefit as % of SAWW	125%	100%

Step 1 calculate dollar-values of current & proposed min/MAX benefits

		SAWW				
min current	=	1,500	x	50%	=	750
MAX current	=	1,500	x	125%	=	1,875
min proposed	=	1,500	x	75%	=	1,125
MAX proposed	=	1,500	x	100%	=	1,500

Step 2 fill in columns (5), (6), (7) of table below

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ratio to SAWW			total	avg		
min	max	# of workers	weekly wages	weekly wages	current benefit	proposed benefit
0.00%	62.50%	150	108,750	725	750	1,125
62.50%	93.75%	100	110,000	1,100	880	1,125
93.75%	125.00%	95	137,750	1,450	1,160	1,160
125.00%	156.25%	50	87,500	1,750	1,400	1,400
156.25%	n/a	45	216,000	4,800	1,875	1,500
TOTAL		440	660,000	1,500	**465,075**	**528,950**

(5) = (4) / (3)
(6) = min(MAX(0.8 x (Col 5), 750), 1875)
(7) = min(MAX(0.8 x (Col 5), 1125), 1500)

(TOTAL 6) = SUMPRODUCT([Col 3], [Col 6])
(TOTAL 7) = SUMPRODUCT([Col 3], [Col 7])

Step 3

direct effect of change	=	(total proprosed benefit)	/	(total current benefit)	- 1
	=	528,950	/	465,075	- 1
	=	13.7%			
		(final answer)			

Reading: Werner 06: Premium

W-06 (030) - (Problem 2)

Model: 2017.Fall #6

Problem Type: Direct Impact of Benefit Change

Find Calculate the direct effect of the state's proposed worker's compensation indemnity benefit change.

Given

State Avg Weekly Wage	2,200

<==== SAWW

Ratio to SAWW min	Ratio to SAWW max	# of workers	total weekly wages
0%	67%	220	178,200
67%	73%	165	234,300
73%	161%	132	330,000
161%	169%	99	384,120
169%	n/a	66	242,880
TOTAL		682	1,369,500

	current	proposed
% of wages compensation rate	90%	90%
min benefit as % of SAWW	60%	66%
MAX benefit as % of SAWW	145%	152%

Step 1 calculate dollar-values of current & proposed min/MAX benefits

		SAWW				
min current	=	2,200	x	60%	=	1,320
MAX current	=	2,200	x	145%	=	3,190
min proposed	=	2,200	x	66%	=	1,452
MAX proposed	=	2,200	x	152%	=	3,344

Step 2 fill in columns (5), (6), (7) of table below

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ratio to SAWW			total	avg		
min	max	# of workers	weekly wages	weekly wages	current benefit	proposed benefit
0.0%	66.7%	220	178,200	810	1,320	1,452
66.7%	73.3%	165	234,300	1,420	1,320	1,452
73.3%	161.1%	132	330,000	2,500	2,250	2,250
161.1%	168.9%	99	384,120	3,880	3,190	3,344
168.9%	n/a	66	242,880	3,680	3,190	3,312
TOTAL		682	1,369,500	2,008	**1,331,550**	**1,405,668**

(5) = (4) / (3)
(6) = min(MAX(0.9 x (Col 5), 1320), 3190)
(7) = min(MAX(0.9 x (Col 5), 1452), 3344)

(TOTAL 6) = SUMPRODUCT([Col 3], [Col 6])
(TOTAL 7) = SUMPRODUCT([Col 3], [Col 7])

Step 3

direct effect of change	=	(total proprosed benefit)	/	(total current benefit)	- 1
	=	1,405,668	/	1,331,550	- 1
	=	5.6%			
		(final answer)			

Reading: Werner 06: Premium

W-06 (030) - (Problem 3)

Model: 2017.Fall #6

Problem Type: Direct Impact of Benefit Change

Find Calculate the direct effect of the state's proposed worker's compensation indemnity benefit change.

Given

State Avg Weekly Wage	1,400

<==== SAWW

Ratio to SAWW min	Ratio to SAWW max	# of workers	total weekly wages
0%	71%	220	114,400
71%	93%	165	202,950
93%	171%	132	236,280
171%	214%	99	259,380
214%	n/a	66	211,860
TOTAL		682	1,024,870

	current	proposed
% of wages compensation rate	70%	70%
min benefit as % of SAWW	50%	65%
MAX benefit as % of SAWW	150%	120%

Step 1 calculate dollar-values of current & proposed min/MAX benefits

		SAWW				
min current	=	1,400	x	50%	=	700
MAX current	=	1,400	x	150%	=	2,100
min proposed	=	1,400	x	65%	=	910
MAX proposed	=	1,400	x	120%	=	1,680

Step 2 fill in columns (5), (6), (7) of table below

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ratio to SAWW			total	avg		
min	max	# of workers	weekly wages	weekly wages	current benefit	proposed benefit
0.0%	71.4%	220	114,400	520	700	910
71.4%	92.9%	165	202,950	1,230	861	910
92.9%	171.4%	132	236,280	1,790	1,253	1,253
171.4%	214.3%	99	259,380	2,620	1,834	1,680
214.3%	n/a	66	211,860	3,210	2,100	1,680
TOTAL		682	1,024,870	1,503	**781,627**	**792,946**

(5) = (4) / (3)
(6) = min(MAX(0.7 x (Col 5), 700), 2100)
(7) = min(MAX(0.7 x (Col 5), 910), 1680)

(TOTAL 6) = SUMPRODUCT([Col 3], [Col 6])
(TOTAL 7) = SUMPRODUCT([Col 3], [Col 7])

Step 3

direct effect of change	=	(total proprosed benefit)	/	(total current benefit)	- 1
	=	792,946	/	781,627	- 1
	=	1.4%			
		(final answer)			

Reading: Werner 06: Premium

W-06 (030) - (Problem 4)

Model: 2017.Fall #6

Problem Type: Direct Impact of Benefit Change

Find Calculate the direct effect of the state's proposed worker's compensation indemnity benefit change.

Given

State Avg Weekly Wage	1,100

<==== SAWW

Ratio to SAWW min	Ratio to SAWW max	# of workers	total weekly wages
0%	59%	270	86,400
59%	67%	203	144,130
67%	147%	162	192,780
147%	160%	122	203,740
160%	n/a	81	149,850
TOTAL		838	776,900

	current	proposed
% of wages compensation rate	85%	90%
min benefit as % of SAWW	50%	60%
MAX benefit as % of SAWW	125%	144%

Step 1 calculate dollar-values of current & proposed min/MAX benefits

		SAWW				
min current	=	1,100	x	50%	=	550
MAX current	=	1,100	x	125%	=	1,375
min proposed	=	1,100	x	60%	=	660
MAX proposed	=	1,100	x	144%	=	1,584

Step 2 fill in columns (5), (6), (7) of table below

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ratio to SAWW			total	avg		
min	max	# of workers	weekly wages	weekly wages	current benefit	proposed benefit
0.0%	58.8%	270	86,400	320	550	660
58.8%	66.7%	203	144,130	710	604	660
66.7%	147.1%	162	192,780	1,190	1,012	1,071
147.1%	160.0%	122	203,740	1,670	1,375	1,503
160.0%	n/a	81	149,850	1,850	1,375	1,584
TOTAL		838	776,900	927	**713,999**	**797,352**

(5) = (4) / (3)
(6) = min(MAX(0.85 x (Col 5), 550), 1375)
(7) = min(MAX(0.9 x (Col 5), 660), 1584)

(TOTAL 6) = SUMPRODUCT([Col 3], [Col 6])
(TOTAL 7) = SUMPRODUCT([Col 3], [Col 7])

Step 3

direct effect of change	=	(total proprosed benefit)	/	(total current benefit)	- 1
	=	797,352	/	713,999	- 1
	=	11.7%			
		(final answer)			