

Solution for Related Other Tax and Refund Problems with Slope Formula

Besides income tax system simplification, other tax and refund situations can also be matched and simplified with simple formula(s). Many brackets, cliff and credit are major issues and problems. There are many brackets for tax refunds in such as KS, MN and federal tax systems. Form K-40H has 23 brackets for Homestead Property Tax Refund. Their ranges are between 1 (100%) and 0. Social security (SS) taxes often have cliff problem. It means SS tax difference may be \$1,000 with slight AGI or income differences such as \$10, which is **unfair**. Federal Earned Income Tax Credit (EITC) Table contains 9 pages for different tax statuses and child numbers, which is complex.

1. Matching/simplifying KS property tax credit rate (24 brackets to 2)

Form K-40H has 23 brackets for Homestead Property Tax Refund.

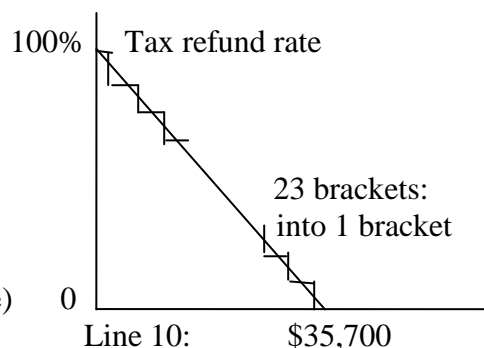
K-40H: 0-\$6,000: 100%, \$6,001-0-\$7,000: 96%, **20 brackets** \$35,701: 0% (2019)
(* \$35,001: 0% in 2018)

One linear solution can be used to match related tax refund rates between 100% and 0 gradually with one bracket.
Then the 23 brackets are simplified to 1 (**95% reduction**).

K-40H Homestead property tax refund rate (2019)

Line 10	0 - \$35,700	Over \$35,700
Refund rate	$1 - (L10 \div 35,700)$	0

Tax revenue change needs to be estimated (~neutral revenue)

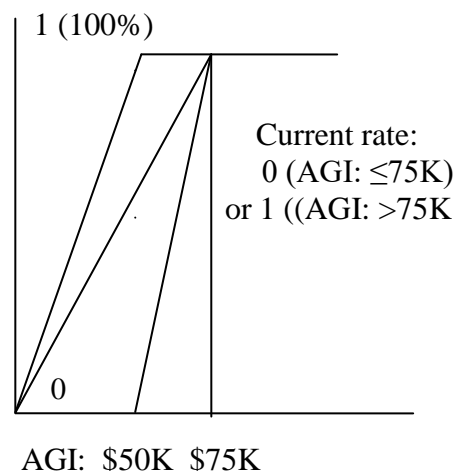


2. Resolving social security tax cliff problem

KS has social security (SS) tax cliff problem for SS benefit into taxable income (TI) rate is 0 when AGI is \leq \$75,000, then the rate jumps to 100% after \$75,000. For AGI \$75K and SS \$25K, tax rate is ~5.2%. When two persons' AGIs are \$74,975 and \$75,025, **their SS tax difference is ~\$1,300**. One linear solution can be used to simplify SS rate from 0 to 1 gradually with one bracket. A linear formula is the most simple and fair. We can design 2 or 3 AGI ranges such as \$50,000 or \$75,000. For its effect to tax revenue (Fiscal Note from Dept of Revenue) and neutral revenue are suggested.

Option: Gradual Rate for SS Benefit into Taxable Income (TI)

1. AGI÷S	0-\$75K	Over \$75K	
Rate	AGI÷S÷75,000)	1	
2. AGI÷S	0-\$50K	Over \$50K	
Rate	AGI÷S÷50,000)	1	
3. AGI÷S	0-\$50K	\$50K-\$75K	Over \$75K
Rate	0	(AGI÷S-50,000)÷25,000)	1



Tax status: (S=1 or 2)

There is no difference for different tax statuses in the current tax law. More retired Married individuals like to file separately for their SS benefits. When S is 2 for Married individuals to file jointly or 1 for other statuses, tax return numbers may be decreased to reduce tax processing cost for Department of Revenue.

3. Matching/simplifying MO federal tax percentage and deduction with fair and less brackets

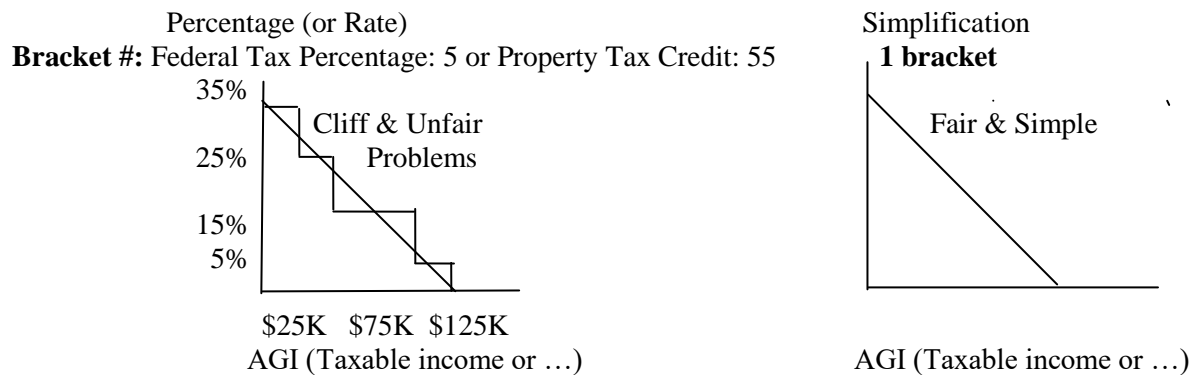
Existing Federal Tax Percentage (MO-1040) has 5 brackets and step rates from 35% to 25%, 15%, 5% and 0% (HB 991 in 2021). The following example shows such as \$1 AGI difference to cause \$1,500 deduction difference*, which is unfair.

***Example:** One person's MO AGI is \$100,001. Another person's AGI is \$100,000. When their federal taxes are the same \$15,000, their MO federal tax deduction is \$750 ($5\% \times 15,000$) or \$2,250 ($15\% \times 15,000$), which means **\$1 AGI difference causes \$1,500 deduction difference**, which is unfair. With the simplified formula, their MO federal tax deduction is \$1,049.96 ($6.99972\% \times 15,000$) or \$1,050.00 ($7\% \times 15,000$) with very slight difference \$0.04, **which is fair and simple**.

Missouri AGI Range, Line 6	Federal Tax Percentage	Simplified Formula
\$25,000 or less	35%	
\$25,001 to \$50,000	25%	$0.35(1-(AGI \div 125,000))$
\$50,001 to \$100,000	15%	
\$100,001 to \$125,000	5%	
\$125,001 or more	0%	0



FIG. Existing MO Federal Tax Percentage (or Property Tax Credit) and Simplification



4. Matching/simplifying MO property tax credit rate (55 brackets to 3)

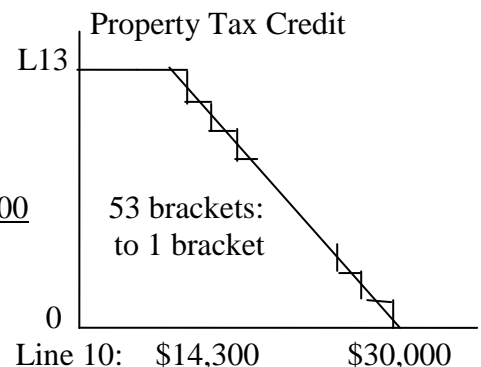
MO Property Tax Credit Chart shows its reduction from \$1,100 to 0 when Line 10 is from 0 to \$30,000. Maximum tax credit (L13: Total Real Estate Tax Paid) is \$1,100.

One linear solution can be used to match related tax credits between \$1,100 and 0 gradually from 53 brackets to 1 with 98% reduction.

MO property tax credit (2019)

Line 10	0-14,000	14,000-30,000	Over 30,000
Credit	L13*	$L13(1-(L10-14,000) \div 16,000)$	0

* L13: Maximum total amount of allowable real estate tax paid is not to exceed \$1,100 (Form MO-PTS, Line 13).



5. MN has Homestead Credit Refund (HCR) for homeowners and renters with 30 brackets, which has many brackets and cliff problem and can also be reduced to 1 with **97% reduction** and comparable results. For homeowner's household income (HI), there are percentages 1%-2.5%: \$0-1,699 is at 1.0% (maximum refund \$3,000) ...more brackets \$80,820-85,359 is at 2.0% (maximum refund \$1,600) ... more brackets \$106,600-110,739 is at 2.5%. No payment is allowed if the household income is \$110,740 or more.

There are two equations for HCR and maximum refund (\$3,000), which is depended on which one is less. Household income (HI) range is 0-\$110,740. When HI is \$110,740 or over \$110,740, HCR is 0.

$$\text{HCR} = (0.01 + \text{HI} \div 7,382,666.7) \times \text{HI} \text{ or } \text{Maximum refund} = 3,000 - \text{HI} \div 36.9133 \text{ (Which one is less)}$$

Its percentage is increased from 1% to 2.5% and maximum refund is reduced from \$3,000 to 0 linearly. It is much more simple and reasonable than original 30 brackets.

6. Working Family Credit (WFC)

MN has Working Family Credit (WFC) with 4 pages and 3,060 WFC numbers ($6 \times 3 \times (45 + 45 + 45 + 35)$). These numbers can be simplified and matched by following Table.

Table MN Working Family Credit Rate Simplification

T=0 for Single, Married Filing Separately, Head of Household or Qualifying Widow(er) or
T=5,000 for Married Filing Jointly

Child#	Line 1 or 3 of Schedule range	Line 1 or 3 MIWMFC	Working Family Credit (WFC) rate of L (Line 1/3) by linear formula	Rate	Range check	WFC = L*Rate
0	0 – (15,000+T)		0.03 (1-L÷ (15,000+T))		0.03 - 0	
1	0 – (40,000+T)		0.1 (1-L÷ (40,000+T))		0.1 - 0	
2	0 – (45,000+T)		0.15 (1-L÷ (45,000+T))		0.15 – 0	

7. Earned Income Tax Credit (EITC) (Linear formula is the most simple and fair)

The Earned Income Tax Credit (EITC) is the federal government's largest refundable credit for workers who earn low or moderate incomes. Four out of five people are eligible to claim it. Both EITC and the Child Tax Credit programs have greatly reduced the poverty for working families. These working family credits assisted an estimate of 9.4 million people out of poverty, including 5 million of children.

The complexity of the current Earned Income Tax Credit (EITC) Table contains 9 pages of the overwhelming tax amounts information. There are two statuses of Married Filing Joint (MFJ) and Single/Head of Household/Qualifying Widow(er) for federal earned income tax credit (EITC). If employers would exempt from calculating the EITC for withholding income taxes, the employees will need to calculate and deduct it when they file tax returns.

Some states often let a partial of the EITC to be deducted as a state EITC. Four linear formulas are designed to match and simplify federal earned income tax credit (EITC) with 9 pages.

Earned Income Tax Credit Rate Simplification to Match EITC Table (9 pages)

S=0 for Single, HH or qualifying widow(er) or S=5,000 for Married Filing Joint (Status (S) _____ and Child #____)

Child #	Earned Income (EI) Range	Earned Income(EI)	Earned Income Tax Credit Rate by Linear formula	Rate	Range check	EITC EI*Rate
0	0 – (15,000+S)		$0.1 (1-EI \div (15,000+S))$		0.1-0	
1	0 – (40,000+S)		$0.4 (1-EI \div (40,000+S))$		0.4-0	
2	0 – (44,000+S)		$0.45 (1-EI \div (44,000+S))$		0.45-0	
3/more	0 – (48,000+S)		$0.5 (1-EI \div (48,000+S))$		0.5-0	

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