2020 Effective Tax Rate by Adjusted Gross Income Percentile
[All figures are estimates based on samples--money amounts are in thousands of dollars]

| Size of adjusted gross income | Number of returns | Amount |  | Average tax rate |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Total Adjusted Gross Income | Total tax after credits |  |
| All returns, total | 157,494,242 | \$12,533,102 | \$1,708,081 | 13.63\% |
| Top 0.001 percent | 1,575 | \$298,180 | \$70,771 | 23.73\% |
| Top 0.01 percent | 15,749 | \$693,109 | \$174,466 | 25.17\% |
| Top 0.1 percent | 157,494 | \$1,419,047 | \$376,728 | 26.55\% |
| Top 1 percent | 1,574,942 | \$2,780,754 | \$722,732 | 25.99\% |
| Top 2 percent | 3,149,885 | \$3,474,592 | \$860,441 | 24.76\% |
| Top 3 percent | 4,724,827 | \$3,985,645 | \$948,113 | 23.79\% |
| Top 4 percent | 6,299,770 | \$4,407,989 | \$1,016,226 | 23.05\% |
| Top 5 percent | 7,874,712 | \$4,775,995 | \$1,071,681 | 22.44\% |
| Top 10 percent | 15,749,424 | \$6,198,022 | \$1,258,335 | 20.30\% |
| Top 20 percent | 31,498,848 | \$8,130,111 | \$1,450,659 | 17.84\% |
| Top 25 percent | 39,373,561 | \$8,862,578 | \$1,511,786 | 17.06\% |
| Top 30 percent | 47,248,273 | \$9,488,648 | \$1,560,458 | 16.45\% |
| Top 40 percent | 62,997,697 | \$10,494,409 | \$1,628,375 | 15.52\% |
| Top 50 percent | 78,747,121 | \$11,257,092 | \$1,668,410 | 14.82\% |

[1] Effective tax rate defined as tax after credits as a proportion of adjusted gross income by AGI level and all higher AGI levels.
Note: Detail may not add to totals because of rounding. Totals in this year exclude dependent returns.
Source: SOI Tax Stats - Individual Statistical Tables by Tax Rate and Income Percentile. Table: "Number of Returns, Shares of AGI and Total Income Tax, AGI Floor on Percentiles in Current and Constant Dollars, and Average Tax Rates. Classified by: Selected Descending Cumulative Percentiles of Returns Based on Income Size Using the Definition of AGI for Each Year." November 2022.
https://www.irs.gov/statistics/soi-tax-stats-individual-statistical-tables-by-tax-rate-and-income-percentile

5348 Hiihfwlyh wd\｛ Udwh e｜Dgmxvwhg Jurvv Lqfrph
＾Doo iljxuhv duh hvwlpdwhv edvhg rq vdpsohvooprqh｜dprxqwv duh lq

| Vl\}h ri dgmx jurvv lqfr | Qxpehu r uhwxus | Dprxqw |  | Dyhudj］ <br> wd\｛ uc |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Wrwdo Dgmxv Jurvv Lqfr］ | Wrwdo v diwhu fuh |  |
| Doo uhwxuqv／ | 474／537／9！ | ＇43／475／953／三 | ＇4／787／658／三 | 47167 ， |
| Wrs 31334 shuf | 4／74 | ＇547／97：／3． | ＇84／6：8／3： | $561<61$ |
| Wrs 3134 shuf | 47／45 | ＇ $7<8 / 534 / 3$ | ＇45：／569／3 | $5819<1$ |
| Wrs 314 shuf | 474／53 | ＇4／366／7：6／三 | ＇5；6／8：$/ 3$ | 5：1771 |
| Wrs 4 shuft | 4／745／3 ${ }^{\text {r }}$ | ＇5／3＜7／＜39／ミ | ＇89：／9＜：／3 | 5：1431 |
| Wrs 5 shuft | 5／；57／3． | ＇5／969／＜；／ | ＇9；；／ $46: / 3$ | 591431 |
| Wrs 6 shuft | 7／569／4t | ＇6／367／；；／ | ＇：96／：97／3 | 5814： |
| Wrs 7 shuft | 8／97；／ | ＇6／699／＜53／三 | ＇；53／668／3 | 571691 |
| Wrs 8 shuft | ：／393／5t | ＇6／98；／889／ミ | ＇；99／77：／3 | 5619； |
| Wrs 43 shuft | 47／453／7！ | ＇7／；36／65：／三 | ＇4／359／934／三 | 5416： |
| Wrs 53 shuft | 5；／573／＜！ | ＇9／6；$</ 3<7 /$ I | ＇4／534／834／三 | 4；1；41 |
| Wrs 58 shuft | 68／634／4\} | ＇9／＜＜：／：6：／三 | ＇4／58＜／9＜； | 4；1331 |
| Wrs 63 shuft | 75／694／6 | ＇：／84＜／9；6／ミ | ＇4／639／5：4／三 | 4：16： |
| Wrs 73 shuft | 89／7；4／； | ＇；／693／；59／玉 | ＇4／6：6／3：6／玉 | 491751 |
| Wrs 83 shuft | ：3／935／64 | ＇；／＜＜i／3：8／玉 | ＇4／746／533／玉 | 481： 41 |

＊4＇Hiihfwlyh wd\｛ udwh ghilqhg dv wd\｛ diwhu fuhglwv dv d sursruwlrq ri dgmxvwhg jurvv lqfrr ohyhov1
Qrwh＝Ghwdlo pd｜qrw dgg wr wrwdov ehfdxvh ri urxqglqj1 Wrwdov lq wklv｜hdu
Vrxufh＝VRL wd\｛ Vwdwv 0 Lqglylgxdo Vwdwlvwlfdo Wdeohv e｜wd\｛ Udw．
kwwsv＝22zzz1luv1jry2vwdwlvwlfv2vrlowd\｛0vwdwv0lqglylgxdo0vwdwlvwlfdo0wdeohv0e｜c

5348 Hiihfwlyh wd\｛ Udwh e｜Dgmxvwhg Jurvv Lqfrph
＾Doo iljxuhv duh hvwlpdwhv edvhg rq vdpsohvooprqh｜dprxqwv duh lq

| Vl\}h ri dgmx jurvv lqfr | Qxpehu r uhwxus | Dprxqw |  | Dyhudj］ <br> wd\｛ uc |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Wrwdo Dgmxv Jurvv Lqfr］ | Wrwdo v diwhu fuh |  |
| Doo uhwxuqv／ | 457／9：6／3i | ＇：／698／9；＜／玉 | ＇＜64／9＜6／3 | 45198 । |
| Wrs 31334 shuf | 4／57 | ＇476／6：3／3． | ＇5：／4：4／3： | 4； $1<8$ । |
| Wrs 3134 shuf | 45／79 | ＇695／8；4／3 | ＇：8／484／3： | 531：61 |
| Wrs 314 shuf | 457／9： | ＇：；6／：95／3 | ＇4：9／485／3． | 5517； |
| Wrs 4 shuft | 4／579／： | ＇4／893／98＜／ミ | ＇694／597／3 | 561481 |
| Wrs 5 shuft | $5 / 7<6 / 7$ ！ | ＇4／＜65／388／ミ | ＇76：／785／3 | 551971 |
| Wrs 6 shuft | 6／：73／4． | ＇5／535／687／ミ | ＇7；8／375／3 | 551351 |
| Wrs 7 shuft | $7 /<; 9 /<$ ！ | ＇5／759／7＜5／ミ | ＇853／7；6／3 | 541781 |
| Wrs 8 shuft | 9／566／9\} | ＇5／956／3： 1 ／ | ＇87＜／39；／3 | $531<61$ |
| Wrs 43 shuft | 45／79：／6： | ＇6／733／8＜9／ミ | ＇97：／448／3 | $4<136$ । |
| Wrs 53 shuft | $57 /<67$／ 9 ، | ＇7／839／4＜：／ミ | ＇$: 88 / 585 / 3$ | 491：91 |
| Wrs 58 shuft | 64／49； 5 ！ | ＇7／＜73／57＜／ミ | ＇$:<5 / 878 / 3$ | 491371 |
| Wrs 63 shuft | $6: / 734 /<4$ | ＇8／64：／＜36／玉 | ＇；56／7；； 3 | $4817<1$ |
| Wrs 73 shuft | $7</ ; 9</ 5$ ！ | ＇8／＜69／＜77／玉 | ＇； $9</ 5: 5 / 3$ | 471971 |
| Wrs 83 shuft | 95／669／8！ | ＇9／745／i＜：／ミ | ＇；$<$ ；／595／3 | 471341 |

${ }^{\prime} 4^{\prime}$ Hiihfwlyh wd\｛ udwh ghilqhg dv wd\｛ diwhu fuhglwv dv d sursruwlrq ri dgmxvwhg jurvv lqfrr ohyhov1
Qrwh＝Ghwdlo pd｜qrw dgg wr wrwdov ehfdxvh ri urxqglqj1 Wrwdov lq wklv｜hdu
Vrxufh＝VRL wd\｛ Vwdwv 0 Lqglylgxdo Vwdwlvwlfdo Wdeohv e｜wd\｛ Udw．
kwwsv＝22zzz1luv1jry2vwdwlvwlfv2vrlowd\｛0vwdwv0lqglylgxdo0vwdwlvwlfdo0wdeohv0e｜c
$4 \ll 8$ Hiihfwlyh Wd\{ Udwh e| vl\}h ri Dgmxvwhg Ju
^Doo iljxuhv duh hvwlpdwhv edvhg rq vdpsohvooprqh| dprxqwv duh lq

| Vl\}h ri dgmx jurvv lqfr | Qxpehu r uhwxu | Dprxqw |  | Wrs DJI shufhqw] | ```Hiihfwlyh wd{ uc ri wrs D shufhqwloht``` |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Wrwdo Dgmxv Jurvv Lqfr] | $\begin{aligned} & \text { Wrwdo v } \\ & \text { diwhu fuh } \end{aligned}$ |  |  |
| Doo uhwxuqv/ | 44; /54; /6! | ' $7 / 4$; $/ 686 / \underline{\text { c }}$ | '8;9/45;/7 | 433133 | $461 \ll 1$ |
| Qr dgmxvwhg jurvv lc | $<77 / 47$ | 0'88/586/9 | '4; | 433133 | $461 \ll 1$ |
| '4 xqghu '4/: | 5/58</9, | '4/6<</; | '43/; ; | <<153 | 461; 4 , |
| '4/333 xqghu '5, | 6/5; $4 /<$ | ' $7 /<3$ :/8! | '99/54 | $<: 15<1$ | 461; 4 , |
| '5/333 xqghu '6, | 6/577/4\} | ';/3:6/<! | '<3/6< | < 7184 । | 461; 61 |
| '6/333 xqghu '7, | 6/435/4 | '43/;64/5 | ';6/74 | <41: : | 461; 8 , |
| '7/333 xqghu '8, | 5/:8;/5t | '45/6<5/4: | '46;/:3 | ; <148 | 461; < |
| '8/333 xqghu '9, | 5/;76/5! | '48/94:/5. | '4;3/78 | ; 91; 41 | 461<5 |
| '9/333 xqghu ':/ | 5/;69/: | '4;/6;7/91 | '585/37 | ; 71741 | 461<: |
| ':/333 xqghu '; | 5/999/6. | ' $4</ \ll 8 / 4$. | '67;/48 | ; 51341 | 47136 |
| ';/333 xqghu '<, | 5/<59/5! | '57/;8;/6! | ' 947/:5 | :<1:8। | 4713 < |
| '</333 xqghu '43, | 5/: $3</$ : | '58/:5;/3: | ':33/6: | : :15; | 47149 , |
| '43/333 xqghu '44, | 5/995/94 | '5:/<76/4 | '; $<9 / 57$ | :71<; ${ }^{\text {a }}$ | 47156 |
| '44/333 xqghu '45, | 5/;75/7! | 165/9;6/3. | '4/4:; /4. | :51:61 | 471631 |
| '45/333 xqghu '46, | 5/:45/; | '66/;<3/7 | '4/773/: | : 31661 | 4716<1 |
| '46/333 xqghu '47, | 5/: $3</ 8$, | 169/8:9/3i | '4/84; /: | 9;1361 | 4717: |
| '47/333 xqghu '48, | 5/967/94 | 16;/557/: | '4/9<3/9: | 981:71 | 4718: |
| '48/333 xqghu '49, | 5/7;7/36 | 16;/789/<! | '4/;94/: | 961841 | 4719:1 |
| '49/333 xqghu '4:, | 5/685/9\& | '6;/;5;/; | '4/<5:/4t | 94174 । | 471: |
| '4:/333 xqghu '4; | 5/483/7! | '6:/93:/4. | ' $5 / 35</ 54$ | $8<175$, | 471;91 |
| '4;/333 xqghu '4<, | 5/584/; | '74/:39/3! | '5/64;/6، | 8:193। | 471<9 |
| '4</333 xqghu '53, | 5/479/9\} | '74/;4</6: | '5/883/7' | 881:31 | 48139 , |
| '53/333 xqghu '58, | </<:3/3, | '556/733/5. | '49/477/: | 861; ; | 48149 , |
| '58/333 xqghu '63, | :/;7:/; | '548/533/5 | '4; /84</3، | 781781 | 4819: |
| '63/333 xqghu '73, | 45/6;3/6t | ' $763 / 7<3 / 5$ | '75/6<;/9' | 6;1;41 | 49146 |
| '73/333 xqghu '83, | </3<i/: | '739/96;/8 | '76/953/3، | 5;1671 | 4:13:1 |
| '83/333 xqghu ':8, | 46/9:</3! | ';5;/67</5 | '433/4<</9. | 531971 | 4;145 |
| ':8/333 xqghu '433, | 8/6:7/7, | '78;/838/9 | ' $9: / 8</ 7{ }^{\prime}$ | <13: 1 | 5414; |
| '433/333 xqghu '533 | 7/3:7/; | '865/363/7 | '<9/;59/5. | 71851 | 561:31 |


${ }^{\prime} 4^{\prime}$ Hiihfwlyh wd\{ udwh ghilqhg dv wd\{ diwhu fuhglwv dv d sursruwlrq ri dgmxvwhg jurvv lqfrph e| Qrwh= Ghwdlo pd| qrw dgg wr wrwdov ehfdxvh ri urxqglqj1 Wrwdov lqfox Vrxufh= WSF fdofxodwlrqv dqg LUV/ 4<<8 Sxeolfdwlrq 4637/ Vwdwlvwl: kwwsv=22zzz1luv1jry2sxe2luv0vrlz

4<;8 Hiihfwlyh wd\{ Udwh e| vl\}h ri Dgmxvwhg Jurvv Lqfrph 0 Dffrxqwlqj iru Fdslwdo Jdl,
${ }^{\wedge}$ Doo iljxuhv duh hvwlpdwhv edvhg rq vdpsohv00prqh| dprxqwv duh lq

| Vl\}h ri dgmx jurvv lqfr | Qxpehu $r$ uhwxus | Dprxqw |  |  |  | Wrs DJ] shufhqw: | Hiihfwlyt wd\{ uc ri wrs D shufhqwlohr |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Wrwdo Dgmxv Jurvv Lqfr] | ```Sruwlrq ri fd jdlqv h{fox iurp DJL``` | ```DJL sor h{foxghg sruw ri fdslwdo:``` | $\begin{aligned} & \text { Wrwdo } \\ & \text { diwhu fuh } \end{aligned}$ |  |  |
| Doo uhwxuqv/ | 434/993/5 | '5/638/<84/7. | '<</;79/683 | '4/967/:5</; | '654/<4:/5 | 433133 | 47198 |
| Qr dgmxvwhg jurvv lc | 4/367/; | 0'6;/36:/6 | '9/63:/9' | 0'64/:5</9 | '4/4< | 433133 | 47198 |
| '4 xqghu '4/: | 5/58:/5: | '4/5<9/6 | '87/75 | '4/683/i: | C | <;1<; | 47179 , |
| '4/333 xqghu '5, | 6/64:/7. | ' $7 /<=9 / 9!$ | '43:/44 | '8/3;6/:' | '</68 | <91:9 | 4717: |
| '5/333 xqghu '6, | 6/786/<. | ';/937/9! | '4<5/; 4 | '; / : < / 71 | '59/78 | <6183 | 47183 , |
| '6/333 xqghu '7, | 6/655/: | '44/95; /4 | '473/: < | '44/:9;/<' | ':7/54 | $<3143$, | 47188 |
| '7/333 xqghu '8, | 6/695/:! | '48/474/: | ' $5<5 / 56$ | '48/766/< | '59:/6; | ;91;61 | 47195 |
| '8/333 xqghu '9, | 6/633/5. | '4;/45:/5. | '577/45 | '4; /6:4/7 | ' $7<5 /$; | ;6185. | 471:31 |
| '9/333 xqghu ':, | 6/5:3/9 | ' $54 / 55</ 8$. | '567/;3 | '54/797/7: | '9;8/;6 | ;315; | 471;31 |
| ':/333 xqghu ';, | 6/534/9\& | '57/34; / | '5;8/39 | '57/637/3 | '<63/54 | : :139 | $471<31$ |
| ';/333 xqghu '<, | 6/795/9! | '5</78; /; | '643/<5 | ' $5</: 9</ ;$ | '4/659/5! | : 61<4 | 48135 |
| '</333 xqghu '43, | 6/589/54 | '63/; ; </6. | '573/83 | '64/45</; | '4/967/: | : 3184 | 48148 |
| '43/333 xqghu '44 | 5/<:; / ! | '64/569/3! | '639/36 | '64/875/3: | '5/454/5' | 9:163 | 4815<1 |
| '44/333 xqghu '45 | 5/;97/: \{ | '65/<3:/; | '568/93 | '66/476/7. | '5/757/8 | 9716: | 48174 |
| '45/333 xqghu '46 | 5/:4;/4! | '66/<88/8 | ' 5 ; </88 | '67/578/4 | '5/:4:/5! | 94188 | 48186 |
| '46/333 xqghu '47. | 5/:39/8: | '69/865/7! | '668/4< | '69/;9:/9 | '6/395/: | 8;1; ; | 48198 |
| '47/333 xqghu '48 | 5/9;3/5! | '6;/;4</; | '6;6/<9 | '6</536/; | '6/587/5' | 89155 | 481:; |
| '48/333 xqghu '49 | 5/894/6\} | ' $6</: 39 / ;$ | ' 753/79 | '73/45:/5 | '6/5:9/4! | 8618; | 481<5 |
| '49/333 xqghu '4: | 5/667/3' | '6;/84;/7' | ' 75; /64 | '6;/<79/: | '6/98;/3 | 84139 | 4913: |
| '4:/333 xqghu '4; | 5/676/9! | ' 74/354/9 | '688/43 | '74/6:9/: | '6/;47/3! | 7;1: | 49153 , |
| '4;/333 xqghu '4< | 5/4<; \ll | '73/986/8. | '887/48 | '74/53:/:' | ' $7 / 37</ 6$ : | 79179 , | 49168 , |
| '4</333 xqghu '53 | 5/497/3: | '75/4: $/ 8$. | ' 776/45 | '75/953/91 | '63/6;7/8. | 77163 , | 4917; |
| '53/333 xqghu '58 | ; /<:9/5 | '533/;9;/5 | '5/4:</< | '536/37;/4 | '55/; ; 7/9 | 7514: | 48158 , |
| '58/333 xqghu '63 | :/78:/<' | '537/6<</4 | '4/<83/; | '539/67</< | '7</9:7/8: | 66167 , | 481:61 |
| '63/333 xqghu '73 | 44/968/9! | ' $735 /<75 /<$ | '7/;57/4 | '73:/:9:/4 | '75/67</3: | 59133 , | 4718: |
| '73/333 xqghu '83 | 9/:34/8 ${ }^{\circ}$ | ' $5<2 /<47 / 6$ | ' 7/957/5! | '635/86;/8 | '88/9;8/5 | 47189 , | 49148 |
| '83/333 xqghu ':8, | 8/95; /96 | '666/:43/6 | '</<4:/4. | '676/95:/8 | '54/795/6. | : 1<: 1 | 4815: |
| ':8/333 xqghu '433 | 4/596/7: | '43:/757/9 | '9/3; </: | '446/847/6 | '54/795/6. | 51761 | 55185 |
| '433/333 xqghu '533 | $<3</ 68$ | ' $44</ 533 / 7$ | '46/937/5 | '465/;37/9 | '5; /:69/8 | $414<1$ | 561;61 |
| '533/333 xqghu '833 | 56;/3; | '9;/<;9/5 | '47/67:/9' | ';6/666/<. | '54/685/4 | $315<1$ | 58177 |
| '833/333 xqghu '4/33 | 74/43 | '5:/874/7! | ';/86</; | '69/3;4/6 | '</87;/5: | 31391 | 5815; |
| '4/333/333 ru F | 4:/64 | ' $73 / 3 \ll / 9$ | '54/939/8 | '94/:39/5 | '48/4:4/; | 31351 | $5718<$ |

*4' Hiihfwlyh wd\{ udwh ghilqhg dv wd\{ diwhu fuhglwv dv d sursruwlrq ri dgmxvwhg jurvv lqfrph e|
${ }^{\wedge} 5^{\prime}$ Sulru wr wkh Wd\{ Uhirup Dfw ri 4<;9/ ydulrxv sruwlrqv ri fdslwdo jdlqv zhuh h\{foxghg iurp wkh frpsxwdwlrq ri DJL/ vxfk wkdw rqo| vrph jdlqv lqfrph1 Odwhu/ doo jdlqv zhuh lqfoxghg lq DJL exw wd\{hg dw d suhihuhqwldo udwh1 Iru pruh lqirupdwlrq/ sohdvh vhh Juhjj D1 Hvhqzhlq/ 533:/ oLqgly Ohjlvodwlyh Klvwru|1\% Zdvklqjwrq/ GF= Frqjuhvvlrqdo Uhvhdufk Vhuylfh1
Qrwh= Ghwdlo pd| qrw dgg wr wrwdov ehfdxvh ri urxqglqj1 Wrwdov lqfos
Vrxufh= WSF fdofxodwlrqv dqg LUV/ 4<;8 Sxeolfdwlrq 4637/ Vwdwlvwlfv ri I
kwwsv=22zzz1luv1jry2sxe2luv0vrli

4<:8 Hiihfwlyh wd\{ Udwh e| Vl\}h ri Dgmxvwhg Ju
^Doo iljxuhv duh hvwlpdwhv edvhg rq vdpsohv00prqh| dprxqwv duh lq

| Vl\}h ri dgmx jurvv lqfr | Qxpehu r uhwxus | Dprxqw |  |  |  | Wrs DJ] shufhqw: | Hiihfwlytwd\{ ucri wrs Dshufhqwlohs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Wrwdo Dgmxv Jurvv Lqfr] | ```Sruwlrq ri fd jdlqv h{fox iurp DJL``` | DJL so: h\{foxghg sruw ri fdslwdo: | $\begin{aligned} & \text { Wrwdo } \\ & \text { diwhu fuh } \end{aligned}$ |  |  |
| Doo uhwxuqv/ | ; $5 / 55</ 61$ | '<7:/:;7/; | '45/373/4;4 | '<8</;58/4 | '457/6;5/4 | 433133 | 451<9 |
| Qr dgmxvwhg jurvv lc | 976/:< | 0'9/637/7 | ' 3 | 0'9/637/7 |  |  |  |
| '4 xqghu '4/ | 7/:6; /: | '5/:46/;1 | 995/887 | 77:176 | '5/<<3 | $\ll 1<$; $4^{\text {( }}$ | 451<9 ( |
| '4/333 xqghu '5, | 8/73:/7 | ';/3:5/6i | $] \quad 995 / 887$ | '44/77; / 76 |  |  |  |
| '5/333 xqghu '6, | 8/335/8! | '45/779/6 | ] , $4<5 /<48$ | 74 |  |  | 461361 |
| '6/333 xqghu 7, | 7/898/: | '48/<89/4' | $4<5 /<48$ | 8<8/774 | 733/<58 | ;91;9:4 | 461361 |
| '7/333 xqghu '8, | 7/867/7' | ' $53 / 7<4 /<$ | '56; /89: | '79/:34/<i7 | '5/43</<46 | : 815643 ( | $4616<$ ( |
| '8/333 xqghu '9, | 7/:6:/5' | '58/<:4/7 | 56;/89. | 79/.34/<; | $5 / 43</<46$ | . 8156431 | $4616<1$ |
| '9/333 xqghu ':, | 7/497/44 | '5:/349/< | '5<5/368 | 89/494/:74 | '6/:<9/9<5 | 961<889 | 461;9( |
| ':/333 xqghu ';, | 6/; 7</96 | '5;/;85/:' | $5<5 / 368$ | $] \quad 89 / 494 /: 74$ | 6/: <9/9<5 | $961<8891$ | 461;9( |
| ';/333 xqghu '<, | 6/:58/4' | '64/9:7/4' | '83:/:49 | '98/546/546 | '8/8<i/83 | 87154331 | 47167 ( |
| '</333 xqghu '43, | 6/7:9/: | '66/363/6i | 83; /:49 | $] \quad 98 / 546 / 546$ | 8/8<;/83< | 87154331 | 471671 |
| '43/333 xqghu '44 | 6/5;5/9t | '67/79</4 | '674/58: | ':3/:33/9: | '9/<59/553 | 7817849 ( | 471;7( |
| '44/333 xqghu '45 | 6/453/7. | '68/; < $/ 5$. | 674/58: | $] \quad: 3 /: 33 / 9: ;$ | 9/<59/553 | 7817849 | 471;7( |
| '45/333 xqghu '46 | $5 /<83 / 8 t$ | '69/; ; 8/91 | '773/8:5 | ':9/;5:/8;7 |  | 6:1997: | 48169 ( |
| '46/333 xqghu '47 | 5/<59/6 | ' $6</ 834 / 6$ | '773/8:5 | ] :9/i5:/8; | ;/336/;85 | 6:1997: | 48169 ( |
| '47/333 xqghu '48 | 5/9;6/96 | '6;/;<6/61 | '4/3:3/97; | 54; / 65/434 | '58/767/346 | 63184: : | 481<; |
| '48/333 xqghu '53 | 43/686/81 | '4:;/<9;/4 | ] $4 / 3: 3 / 97$; | ] $54 ; /<65 / 436$ | 58/767/346 | 63184: : | 481<; |
| '53/333 xqghu '58 | 8/8<; / 4 | '457/643/8 | '8;9/37 | '457/;<9/9 | '4:/349/5: | 4719964 | 4;175 |
| '58/333 xqghu '63 | 5/:77/5\} | ':7/957/9 | '936/:8 | ':8/55;/7. | '44/734/: | :1;884 | 53199 |
| '63/333 xqghu '83 | 5/:7:/94 | '433/49;/4 | '5/488/8! | '435/656/: | '4;/539/< | 7184:; | 551;5 |
| '83/333 xqghu '433 | :;4/73 | '84/883/; | '4/:76/9. | ' $86 / 5<7 / 8$ | '46/676/; | 414:97 | 5;193 |
| '433/333 xqghu '533 | 485/67 | ' $4</<4 ; / 7$ | '4/484/; | '54/3:3/6. | '9/;57/:، | 315594 | 661<4 |
| '533/333 xqghu '833 | $5</ 4<$ | ';/47</<' | '<5:/5; | '</3: :/5! | '6/5<7/: | 31373< | 6913: |
| '833/333 xqghu '4/33 | 6/5; | '5/4; / <' | ' $73</$; $<$ | '5/8<:/; | '<86/57 | 313387 | 681:41 |
| '4/333/333 ru F | 4/45 | '5/677/9: | ':47/;5 | ' $6 / 38</ 7$ ! | '4/39:/4i | 313347 | 671; ; |

${ }^{\wedge} 4$ ' Hiihfwlyh wd\{ udwh ghilqhg dv wd\{ diwhu fuhglwv dv d sursruwlrq ri dgmxvwhg jurvv lqfrph e|

 Ohjlvodwlyh Klvwru|1\% Zdvklqjwrq/ GF= Frqjuhvvlrqdo Uhvhdufk Vhuylfh1



Qrwh= Ghwdlo pd| qrw dgg wr wrwdov ehfdxvh ri urxqglqj1 Wrwdov lqfos Vrxufh= WSF fdofxodwlrqv dqg LUV/ Vwdwlvwlfv ri Lqfrph 4<:8/ Wc kwwsv=22zzz1luv1jry2sxe2luv0vrl:

4<98 Hiihfwlyh wd\{ Udwh e| Vl\}h ri Dgmxvwhg Jurvv Lqfrph
${ }^{\wedge}$ Doo iljxuhv duh hvwlpdwhv edvhg rq vdpsohv00prqh| dprxqwv duh lq wkrxvdqgv ri grooduv'

| Vl\}h ri dgmx jurvv lqfr | Qxpehu r uhwxu | Dprxqw |  |  |  | Wrs DJ] shufhqw] | Hiihfwlyh wd\{ uc ri wrs D shufhqwloht |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Wrwdo Dgmxv <br> Jurvv Lqfr] | Sruwlrq ri fd jdlqv h\{fox! iurp DJL | DJL sor h\{foxghg sruw ri fdslwdo: | Wrwdo v diwhu fuh |  |  |
| Doo uhwxuqv/ | 9:/8<9/6: | ' $73</ 669 /:$ | '</:58/8! | ' $74</ 557 /:$ | ' $7</ 85</ 9$. | 433133 | 44183 |
| Qr dgmxvwhg jurvv lc | 6<:/6: | '3 | c | ' 3 | ' 3 | 433133 | 441; 4 |
| Xqghu '933 | 7/4;3/634 | '3 | ' $4<6 / 545$ | ':46/:89 | ' $7 /$ / $5<$ | <<174 ( | 441; 4 ( |
| '933 xqghu '4/ | 6/539/8! | '853/87 | - $6 / 515$ |  | , $1.5<$ | <<174 | 441; 6 |
| '4/333 xqghu '5, | :/5<i/4! | '9/96:/: | 0'9:/ : | '9/89</<! | '65;/85 | ; 17 ; | 441; 6 |
| '5/333 xqghu '6, | 9/45; /: | '43/;99/4 | ' $47</<9$ | '44/349/4. | ':9;/:7 | : : 19<1 | $441<7$ |
| '6/333 xqghu '7, | 9/36; /: | ' $4: / 9<8 / 5$ | '555/65 | ' 4 :/<4:/8 | '4/689/4: | 9;195 | 4513; |
| '7/333 xqghu '8, | 8/:9:/8. | '56/763/< | '58:/76 | '56/9; / 7 : | '4/;:;/: | $8<19<1$ | 4515 < |
| '8/333 xqghu '9, | 8/793/: | '5;/934/9 | ' 749/9: | '5</34;/6 | '5/73</5. | 84149 | 4518; |
| '9/333 xqghu ':, | 8/7<:/94 | '67/<64/5 | '536/77 | '68/467/9. | '6/363/5 | 7613; | 451<8 |
| ':/333 xqghu '; | 7/<:</9t | '69/; ; 6/4 | '4:7/94 | '6:/38:/: | '6/68:/5 | 671<7 | 4617: |
| ',/333 xqghu '<, | 7/47: /; | '68/33:/3. | '567/89 | '68/574/8 | '6/69;/3! | 5:18; | 47143 |
| '</333 xqghu '43, | 6/6;:/; | '65/34:/3: | '485/4; | '65/49</4 | '6/59</4 | 54177 | 471; 5 |
| '43/333 xqghu '48 | :/:47/8! | '<4/87</; | '<44/78 | '<5/794/5 | '43/:44/< | 49176 | 48194 |
| '48/333 xqghu '53. | 4/:94/<! | ' $5</ ; 7</ 8$ | '993/3: | '63/83</9: | '7/4; ; < | 81351 | $4<16<1$ |
| '53/333 xqghu '83. | 4/6<6/i: | ' 6</856/: | '4/; $7 /$ /. | '74/73;/8' | ':/76</; | 51741 | $541<7$ |
| '83/333 xqghu '433 | 4; ; < $<4$ | '45/773/6 | '4/594/5 | '46/:34/9' | '6/987/4! | 31681 | $5 ; 14<1$ |
| '433/333 xqghu '833 | 76/<9 | ':/497/7. | '4/:97/9 | ';/<5</4 | '5/:85/4: | 313:1 | 5<1; 6 |
| '833/333 xqghu '4/33: | 4/73 | '<79/47 | ' $7:: /<$; | '4/757/4' | '73;/73 | 31331 | 5:177 |
| '4/333/333 ru F | 979 | '4/767/6! | ';5;/8; | '5/595/<، | '936/63 | 31331 | 59199 |

${ }^{\wedge} 4$ ' Hiihfwlyh wd\{ udwh ghilqhg dv wd\{ diwhu fuhglwv dv d sursruwlrq ri dgmxvwhg jurvv lqfrph e|

 Ohjlvodwlyh Klvwru|1\% Zdvklqjwrq/ GF= Frqjuhvvlrqdo Uhvhdufk Vhuylfh1
 Qrwh= Ghwdlo pd| qrw dgg wr wrwdov ehfdxvh ri urxqglqji Wrwdov lqfor
Vrxufh= WSF fdofxodwlrqv dqg LUV/ Vwdwlvwlfv ri Lqfrph 4<
kwwsv=22zzz1luv1jry2sxe2luv0vrle

4<88 Hiihfwlyh wd\{ Udwh e| Vl\}h ri Dgmxvwhg Jurvv Lqfrph
${ }^{\wedge}$ Doo iljxuhv duh hvwlpdwhv edvhg rq vdpsohv00prqh| dprxqwv duh lq wkrxvdqgv ri grooduv'

| Vl\}h ri dgmx jurvv lqfr | Qxpehu r uhwxus | Dprxqw |  |  |  | Wrs DJ] shufhqw] | Hiihfwlyhwd\{ ućri wrs Dshufhqwloht |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Wrwdo Dgmxv Jurvv Lqfr] | ```Sruwlrq ri fd jdlqv h{fox! iurp DJL``` | DJL soz <br> h\{foxghg sruw ri fdslwdo: | $\begin{aligned} & \text { Wrwdo v } \\ & \text { diwhu fuh } \end{aligned}$ |  |  |
| Doo uhwxuqv/ | 8;/583/4 | ' $57</ 75</ 4$ | '7/8:9/9: | '587/338/: | '5</946/: | 433133 | 44199 |
| Qr dgmxvwhg jurvv lc | 765/35 | ' 3 | '89/:3 | '89/:3 | C | 433133 | 44199 |
| Xqghu '93 | 6/; $6</ 6 t$ | '4/594/:، | '45/99 | '4/5:7/6 | c | <<159 | 44199 |
| '933 xqghu '4/ | 6/535/: | '5/899/4. | '58/4: | '5/8<4/5. | '75/4: | <519: | 441:5 |
| '4/333 xqghu '4, | 7/856/8\} | '8/949/7i | 17;/4: | '8/997/91 | '549/7: | ;:14: | 441;5 |
| '4/833 xqghu '5, | 7/458/7! | ':/545/7! | '8;/48 | ':/5:3/8 | '685/<7 | :<173 | 45134 |
| '5/333 xqghu '5, | 7/449/; | '</5:8/3: | ':8/45 | '</683/41 | '884/: 4 | :5165 | 45156 |
| '5/833 xqghu '6, | 7/644/; | '44/;8; /8: | '9:/; | ' $44 /<59 / 6$ | ':<6/: < | 98158 | 4517< |
| '6/333 xqghu '6, | 7/65</8. | '47/398/; | ':3/:3 | '47/469/8. | '4/39:/6i | 8:1; 8 , | 451; 4 |
| '6/833 xqghu '7, | 7/668/7! | '49/587/8. | '93/88 | '49/648/3 | '4/647/7: | 83175 | 4614; |
| '7/333 xqghu '7, | 7/49</; | '4:/:46/7 | ':8/3: | '4:/:; ;/8 | '4/836/4. | 751<; | 46196 |
| '7/833 xqghu '8, | 6/;6;/: | '4;/54:/3 | '9;/9; | '4;/5;8/: | '4/959/51 | 681;5 | 4714; |
| '8/333 xqghu '9, | 8/;95/94 | '65/394/9' | '4;4/77 | '65/576/3 | '6/3:9/<، | $5<156$ | 471; 6 |
| '9/333 xqghu ':, | 6/;:4/; | '58/353/; | '473/3; | '58/493/< | '5/:45/3' | $4<149$ | 4915; |
| ':/333 xqghu ';, | 5/733/46 | '4:/;<:/7 | '446/68 | '4;/343/: | '5/455/:، | 45185 | 4:1:< |
| ',/333 xqghu '<, | 4/745/: \& | '44/<73/3. | '455/38 | '45/395/3 | '4/864/; | ;1731 | $4<158$ |
| '</333 xqghu '43, | <45/3< | ';/955/5، | '<9/5< | ';/:4;/8، | '4/4:3/7i | 81<: 1 | 53186 |
| '43/333 xqghu '48. | 4/84; 5 . | ' $4: /<56 / 8$ | ' $75</ 7$ : | '4;/686/3i | '5/9<5/6' | 71731 | 541:3 |
| '48/333 xqghu '53. | 758/<; | ':/633/5! | '599/8; | ':/899/;' | '4/63;/5 | 41;31 | 58173 |
| '53/333 xqghu '58. | 543/5; | '7/9;6/51 | '549/5: | '7/;<</8، | '<94/3; | 413:1 | 5:199 |
| '58/333 xqghu '63. | 453/94 | '6/5; </9i | ' $4:</ 93$ | '6/79</5i | ':78/<6 | 31:41 | $5<175$ |
| '63/333 xqghu '83. | 4<3/: 3 | ':/475/; | ' $7<5 / 59$ | ':/968/3. | '4/<95/41 | 31831 | 631; ; |
| '83/333 xqghu '433 | : :/93 | '8/484/9 | ' 88 :/85 | ' $8 /: 3</ 5$ : | '4/;85/7! | 314:1 | 67173 |
| '433/333 xqghu '483 | $45 /<9$ | '4/87</: | '57</87 | '4/:<</6: | '986/6< | 31371 | 69175 |
| '483/333 xqghu '533 | $6 /<7$ | '9:8/89 | '484/5; | ';59/;7 | '638/; 6 | 31351 | 6917: |
| '533/333 xqghu '833 | 7/35 | '4/476/9i | '679/35 | '4/7; </9 | ' $87</ 4$ : | 31341 | 69165 |
| '833/333 xqghu '4/33: | 95; | '74:/<: | '4:3/; 3 | '8; ; /: | '53</;7 | 31331 | 681:7 |
| '4/333/333 ru F | 59 : | '89:/8; | '578/3; | ';45/99 | ' $5<3 /<$; | 31331 | 681; 4 |

*4' Hiihfwlyh wd\{ udwh ghilqhg dv wd\{ diwhu fuhglwv dv d sursruwlrq ri dgmxvwhg jurvv lqfrph e|

 Ohjlvodwlyh Klvwru|1\% Zdvklqjwrq/ GF= Frqjuhvvlrqdo Uhvhdufk Vhuylfh1


Qrwh= Ghwdlo pd| qrw dgg wr wrwdov ehfdxvh ri urxqglqj1 Wrwdov lqfoz
Vrxufh= WSF fdofxodwlrqv dqg LUV/ Vwdwlvwlfv ri Lqfrph/ Lqglylgxdo Lqfrph wd\{ Uhwxı kwwsv=22zzzlluv1jry2sxe2luv0vrlí
$4<78$ Hiihfwlyh Wd\{ Udwh e| vl\}h ri Dgmxvwhg Ju
^Doo iljxuhv duh hvwlpdwhv edvhg rq vdpsohv00prqh| dprxqwv duh lq

| Vl\}h ri dgmx jurvv lqfr | Qxpehu $r$ uhwxus | Dprxqw |  |  |  | Wrs DJ] shufhqw: | Hiihfwlyt wd\{ uc ri wrs D shufhqwloht |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Wrwdo Dgmxv Jurvv Lqfr] | ```Sruwlrq ri fd jdlqv h{fox iurp DJL``` | ```DJL soz \\ h\{foxghg sruw ri fdslwdo:``` | $\begin{aligned} & \text { Wrwdo } \\ & \text { diwhu fuh } \end{aligned}$ |  |  |
| Doo uhwxuqv/ | 7</: $83 /<$ - | '453/33; /9 | '6/<69/6. | '455/44: /: | ' $4: / 383 / 6$ | 433133 | $461<81$ |
| Xqghu ' 83 | 8/785/3¢ | '4/7<; 7 : | '8/54 | '4/7<;/7: | C | 433133 | $461<8$ । |
| '833 xqghu '4/ | 9/546/4 | ' 7/993/< | '49/:8 | '7/9: / /: | '46;/73 | ; <137 | 471461 |
| '4/333 xqghu '4, | :/64</4! | '</546/< | '59/7; | '</573/7 | '8:8/<4 | :9188 | 4718; |
| '4/833 xqghu '5, | :/4:8/: 6 | '45/86:/; | '79/57 | '45/8;7/4' | '4/3:4/: | 941;71 | 481631 |
| '5/333 xqghu '5, | 9/67;/4 | '47/569/3' | ' $7</ 39$ | '47/5;8/4. | '4/677/<' | 7:175 | 49154 , |
| '5/833 xqghu '6, | 8/585/4! | '47/6<7/9: | '97/65 | '47/78;/<1 | '4/757/;! | 67199 | 4:175 |
| '6/333 xqghu '7, | 9/:6:/7 | '56/475/8. | '44; /53 | '56/593/:! | '5/89</7. | 57143 , | $4<143$, |
| '7/333 xqghu '8, | 5/945/;! | '44/874/< | '<8/67 | '44/96:/6 | '4/83: /8. | 43189 , | 561871 |
| '8/333 xqghu '43, | 4/; ; 8/7 | '45/5:6/5 | '5:8/69 | '45/87;/8. | '5/44</8! | 81641 | $5: 18<1$ |
| '43/333 xqghu '48 | 686/67 | '7/59:/4' | '483/57 | '7/74:/6 | '4/358/6. | 41851 | 6813; |
| '48/333 xqghu '53 | 488/63 | '5/99; /<i | '<;/85 | '5/:9:/7 | ': $: 8 / 4$; | 31;41 | 6;1<9 |
| '53/333 xqghu '58 | ; 6/55 | '4/;86/:، | ':;/38 | '4/<64/:! | ' $94</<4$ | $317<1$ | 741:; |
| '58/333 xqghu '83 | 453/55 | ' 7/385/9! | '568/9; | ' 7/5; ;/6i | '4/98</9! | 31661 | $761<31$ |
| '83/333 xqghu '433 | $66 / 7<$ | '5/565/: | '535/:6 | '5/768/81 | '4/489/5. | $313<1$ | 7;1;61 |
| '433/333 xqghu '483 | 8/86 | '994/79 | '; ;/47 | ':7</93 | '6;:/<9 | 31351 | 831751 |
| '483/333 xqghu '633 | 5/; : | ' $89</ 8<$ | '44:/; 9 | '9;:/79 | '683/43 | 31341 | $7<199$, |
| '633/333 xqghu '833 | 85 ; | '535/36 | '9:/6< | '59</76 | '456/94 | 31331 | 7;1651 |
| '833/333 xqghu '4/33 | 58 ; | '49</: 7 | '83/:; | '553/86 | ' $43</<9$ | 31331 | 831391 |
| '4/333/333 ru F | : 4 | '456/6; | '68/68 | '48; / : 6 | ' : </<3 | 31331 | 831661 |

${ }^{*} 4^{\prime}$ Hiihfwlyh wd\{ udwh ghilqhg dv wd\{ diwhu fuhglwv dv d sursruwlrq ri dgmxvwhg jurvv lqfrph e|
Qrwh= Ghwdlo pd| qrw dgg wr wrwdov ehfdxvh ri urxqglqjl Wrwdov lqfor
Vrxufh= WSF fdofxodwlrqv dqg LUV/ Vwdwlvwlfv ri Lqfrph iru 4<78/
kwwsv=22zzz1luv1jry2sxe2luv0vrl278vrl
Dovr dffhvvhg yld Jrrjoh

VRXUFHV
VRL uhsruwv iru hdfk |hdu vlqfh 4<4: duh dydlodeoh rqolqh dw wkh iroorzlqj olqnv=

| $\backslash \mathrm{HDU}$ | VLWH |  |
| :---: | :---: | :---: |
| 4<4:04<67 | kwwsv=22zzz1luv1jry2sxe2luv0vrl2\{\{vrluhssw4du1sgi/ uhsodflqj \{\{ zlwk wkh wzr0gljlw \| kwws=22zzz1luv1jry2sxe2luv0vrl167vrluhssw4du1sgi | \|hdu/ h1j1 |
| $4<6704 \lll$ | kwwsv=22zzzlluv1jry2vwdwlvwlfv2vrlowd\{0vwdwv0dufklyh04<670wr04<<<0wd\{01qirupdwlrq0iu. | up0lqglylgxdov |
| 4<<90534: | kwwsv=22zzzlluv1jry2vwdwlvwlfv2vrlowd\{0vwdwv0lqglylgxdo0lqfrph0wd\{0uhwxuqv0sxeolfdwl | 1 fq046370frpsohwh0uhsruw |

