

Scott Gray's Gaming CGI Programs

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CGI Card Counter

```
#!/usr/bin/perl
# By Scott David Gray
# Copyright 1999
# Set initial HTML values
$mylocation = "http://www.unseelie.org/cgi-bin/cardco.cgi" ;
$title = "Perl Card Calculator Page!" ;
$firstline = "Perl Card Calculator:" ;
$rbgcolor = "99AABB" ;
$fontcolor = "222288" ;
$linkcolor = "0000FF" ;
$rpastlinkcolor = "4422CC" ;
$rclicklinkcolor = "000000" ;
# Gather raw data
use CGI qw(:standard);
$deck = param("deck");
$target = param("target");
$hand = param("hand");
# Calculate things
# probability=1-(((D-T)!-((D-T-H)!))/((D!)-((D-H)!-1))
# Where D=deck size, T=number of target cards and H=number of cards to be drawn
# into the hand.
$numerator=1 ;
$denominator=1 ;
$counter=$hand ;
while ($counter > 0) {
    $numerator=($numerator*($deck-$target-$counter+1)) ;
```

```

$denominator=($denominator*($deck-$counter+1)) ;

$counter = ($counter-1) ;

}

$result= ((1-($numerator/$denominator))*100) ;

if ($target > $deck || $hand > $deck || $hand < 1 || $target < 1) {

    $result=0 ;

}

# Output

print "Content-type: text/html\nPragma: no-cache\n\n";

# HTML

print <<END_HTML;

<HTML>

<HEAD>

<TITLE>$rtitle</TITLE></HEAD>

<BODY BGCOLOR="\#$rbgcolor\" TEXT="\#$rfontcolor\" LINK="\#$rlinkcolor\"
VLINK="\#$rpastlinkcolor\" ALINK="\#$rclicklinkcolor\">

<H2>$rfirstline</H2>

<br>

&copy; 1999 by <A HREF=http://www.unseelie.org/>Scott David Gray</A>.

<p>

END_HTML

if (param()) {

print <<END_HTML2;

<HR>

    There is a $result% chance of drawing at least one target card, for a deck
    size input as $deck, a number of target cards input as $target, and a number of
    cards to be drawn input as $hand.

```

<P>

<HR>

<P>

END_HTML2

}

print <<END_HTML3;

One can calculate the probability of drawing at least ONE of a set of target cards from a deck by using the following formula, in which D=deck size, T=number of target cards and H=number of cards to be drawn into the hand:

probability=1-(((D-T)!-((D-T-H)!))/((D!)-((D-H!)-1))

<HR>

<P>

The form below allows you to submit numbers to the card calculator program. The numbers will be crunched on another machine, and you will be told the probability of drawing one or more specific target cards from a random deck of any size with any number of draws.

<P>

When you tell the program how many cards are in the deck, count all unidentified cards in people's hands, and discount all cards that you know the identity of.

<P>

Likewise, when you tell the program how many target cards are in the deck, discount all target cards that you know the identity of.

<P>

EX: Henry and John are playing cards. They each have a hand of four cards, from a normal 52 card deck. John has an ace, a ten, and 2 fours. John doesn't know what Henry has. If John draws three more cards, and he wants to draw at least one more ace, to calculate his chances with this program he would answer:

<P>

48 cards in the deck (52 card deck, minus the cards in John's hand).

3 target cards (4 aces in the deck, minus the one John knows about).

3 cards to be drawn.

<P>

You must make at least one draw, and have at least one target card. The deck must have at least as many cards as will be drawn. The deck must have at least as many cards as there are target cards.

<P>

All numbers must be input as positive integers. Neither the size of the hand, nor the number of target cards, can exceed the size of the deck.

<P>

<HR>

<FORM ACTION=\"\$mylocation\" METHOD=GET>

<H3>Data:</H3>

Total number of cards in deck: <INPUT NAME=\"deck\">

Number of target cards in deck: <INPUT NAME=\"target\">

Number of cards to be drawn: <INPUT NAME=\"hand\">

<INPUT TYPE=\"submit\" VALUE=\"Calculate\">

</FORM>

<P>

<HR>

This program was designed (and the math calculated) by Scott David Gray, from the Sudbury Valley School.

<HR>

If you find this program to be useful, you will want to check out my

PERL General Dice Pool Calculator program,

and

PERL Shadowrun Dice Pool Calculator program.

<P>

Click here for copy of this program.

</FORM>

<P>

<HR>

<P>

<CENTER>

If you find this program useful, please treat me to to a \ \$3 cup of coffee!!!

<form action="https://www.paypal.com/cgi-bin/webscr" method="post">
<input type="hidden" name="cmd" value="_s-xclick">
<input type="hidden" name="encrypted" value="-----BEGIN PKCS7-----
MIIHZwYJKoZlIhvcNAQcEoIIHWDCCB1QCAQExggEwMIIBLAIBADCBIDCBjjELMAkGA1UEBhMC
VVMxCzAJBgNVBAGTAkNBMRyWFAyDVQQHEw1Nb3VudGFpbiBwaWV3MRQwEgYDVQQKEwt
QYXIQYWwgSW5jLjETMBEGA1UECzQKbG12ZV9jZXJ0czERMA8GA1UEAxQlOG12ZV9hcGkxHDA
aBkgqhkiG9w0BCQEWDXJlQHBheXBhbC5jb20CAQAwDQYJKoZlIhvcNAQEBBQAEgYAbpE+8xC
b+nC8nwgVx1OtFerL+i2As0Ofv0yxeyMYHXs8tbM55DsQBofEXaMT6Gsy8qbC0FJs3BSeOaX2X
Aw8P07haRNJqFV2h6AdugcNEBqaiZPaQGtLhPVz5fwapoy3O6q00iS1q+vDFOJR5gXx4bLg4Tmv
12K3mHxGjXn1pTELMakGBSsOAwIaBQAweQGCSqGSIb3DQEHATAUBggqhkiG9w0DBwQIW4
aUAFC1riuAgcA0loE58jIeXsrgiYAgM3eLjr9OgJV2vmhKP+xBdu5cg0yfbOIYlv5sAMF/h1YqFHw9N
RPBuFhHK//fuggot956LWQiMiI9iEV7fcE5c46RbBA9shBSYQCdFe0xmY/paKTyswosXMLF341F
ZXeinCNTcrSYsqDef1v7jRtC5DUYD8MaWvHpIoSMZbHy3hT8/Fhrvdo4ft9dQUWGdvF8hD0j9rdz

CGI Dice Pool Calculator

```
#!/usr/bin/perl

# (c) 2000 by Scott David Gray

# Formula is  $N!/C(N,M)$ 

# Set initial HTML values

$mylocation = "http://www.unseelie.org/cgi-bin/dicepo.cgi" ;

$title = "Scott Gray's Dice Pool Calculator" ;

$firstline = "Scott Gray's Dice Pool Calculator" ;

$rbgcolor = "FFFFFF" ;

$fontcolor = "000000" ;

$linkcolor = "000000" ;

$rpastlinkcolor = "FF0000" ;

$rclicklinkcolor = "FF00FF" ;

# Gather raw data

use CGI qw(:standard);

$number = param("number");

$sides = param("sides");

$target = param("target");

$cumulate = param("cumulus");

# Calculate things

if ($cumulate=="1") {

    $cume=" (cumulative)";

}

elsif ($cumulate=="0") {

    $cume=" (non-cumulative)";

}
```



```

else {
    $cume=" (both cumulative and non-cumulative)"; }

# Output

print "Content-type: text/html\nPragma: no-cache\n\n";

# HTML

print <<END_HTML;

<HTML>

<HEAD>

<META NAME="description" CONTENT="A cgi program to calculate dice pools for
rpgs.">

<META NAME="keywords" CONTENT="die dice pool pools shadowrun star trek world
of darkness wod storyteller vampire werewolf mage wraith changeling hunter rpg
roleplaying game free">

<TITLE>${rtitle}</TITLE></HEAD>

<BODY BGCOLOR="\#$rbgcolor\" TEXT="\#$rfontcolor\" LINK="\#$rlinkcolor\"
VLINK="\#$rpastlinkcolor\" ALINK="\#$rclicklinkcolor\">

<H2>${rfirstline}</H2>

<p>

This program is &copy; 2000 by <a href="\http://www.unseelie.org/">Scott
David Gray</A>.

<p>

This program is designed to calculate probabilities when using a dice pool.

<p>

Dice pools are used in role playing games such as <b>Shadowrun</b>, <b>Star
Trek</b>, the <b>Storyteller</b> games, and other games. A dice pool is used
by rolling a number of dice and, rather than adding them together, comparing
the rolls to a <i>target number</i> and counting how <i>many</i> dice meet that
target.

<p>

END_HTML

if ($number>0 && $sides>1 && $sides<1000 && $target<($sides+1) && $target>1 &&

```

```

$target<1000) {
print <<END_HTML_2;

  Here are the figures$cume for $number $sides-sided dice rolled against a
target number of $target:

  <p>
END_HTML_2

$an1=0;
$av=0;
# Probability of success:
$pst=($sides - $target + 1) / $sides;
# Probability of failure:
$pft=($target-1) / $sides;
# Countdown from number of dice to zero
for ( $m=$number ; $m>0 ; $m-- ) {
$nm=($number-$m);
$n1=1;
for ($counter=1;$counter<($number+1);$counter++) {
$n1*=$counter;
}
$m1=1;
for ($counter=1;$counter<($m+1);$counter++) {
$m1*=$counter;
}
$nm1=1;
for ($counter=1;$counter<($nm+1);$counter++) {
$nm1*=$counter;
}
}

```

```

$ps=1;
for ($counter=1;$counter<($m+1);$counter++) {
$ps*=$pst;
}
$pf=1;
for ($counter=1;$counter<($nm+1);$counter++) {
$pf*=$pft;
}
# Calculate C(N, M)
$cnm=$n1/($nm1 * $m1);
# Calculate actual probability of success
$an=$cnm*$ps*$pf;
# Add to cumulative average of successes
$av+=$( $an*$m);
$an1+=$an;
if ($cumulate==0 || $cumulate==2) {
if ($m > 1) {
$val=($an*100);
printf("The probability of $m successes is $val");
printf("<br>")
}
if ($m < 2) {
$val=($an*100);
printf("The probability of $m success is $val");
printf("<br>")
}
}

```

```

}
if ($cumulate==1 || $cumulate==2) {
if ($m > 1) {
$val=($an1*100);
printf("The probability of $m successes or more is $val");
printf("<br>")
}
if ($m < 2) {
$val=($an1*100);
printf("The probability of $m success or more is $val");
printf("<br>")
}
}
if ($m==1) {
$no1=((1-$an1)*100);
printf("The probability of no successes is $no1");
}
}
} else {
print <<END_HTML_BAD;

```

When entering the fields, be sure that the number of dice you enter is greater than zero, that the number of sides you enter is between 2 and 999 (inclusive), and that the target number you enter is between 2 and the number of sides (inclusive).

```

END_HTML_BAD

```

```

}
print <<END_HTML_END;

```


<p>

and here is the form itself:

<p>

<FORM ACTION="\\$mylocation\" METHOD="\get\">

Number of dice to be thrown: <INPUT name="\number\">

Number of sides each die has: <INPUT name="\sides\">

Target number: <INPUT name="\target\">

<p>

<INPUT type="\radio\" name="\cumulus\" value="\0\">Not cumulative

<INPUT type="\radio\" name="\cumulus\" value="\1\">Cumulative

<INPUT type="\radio\" name="\cumulus\" value="\2\">Both cumulative and not cumulative

<p>

<INPUT type="\submit\" name="\action\" value="\Press once to send\">

<INPUT type="\reset\">

<P>

<HR>

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<HR>

If you find this program to be useful, you will want to check out my

PERL Card Calculator program,

and

PERL Shadowrun Dice Pool Calculator program.

<P>

Click here for a copy of this program.

</FORM>

<P>

<HR>

<P>

<CENTER>

If you find this program useful, please treat me to to a \ \$3 cup of coffee!!!

<form action="https://www.paypal.com/cgi-bin/webscr" method="post">
<input type="hidden" name="cmd" value="_s-xclick">
<input type="hidden" name="encrypted" value="-----BEGIN PKCS7-----
MIIHZwYJKoZlIhvcNAQcEoIIHWDCCB1QCAQEExggEwMIIBLAIBADCBIDCBjJELMAkGA1UEBhMC
VVMxCzAJBgNVBAGTAkNBMRywFAYDVQQHEw1Nb3VudGFpbWV3MRQwEgYDVQQKEwt
QYXlQYWwgSW5jLjETMBEGA1UECzQKbG12ZV9jZXJ0czERMA8GA1UEAxQIbG12ZV9hcGkxHDA
aBgkqhkiG9w0BCQEWDXJlQHBheXBhbC5jb20CAQAwDQYJKoZlIhvcNAQEBBQAEgYAbpE+8xC
b+nC8nwgVx1OtFerL+i2As0Ofv0yxeyMyHXs8tbM55DsQBofEXaMT6Gsy8qbC0FJs3BSeOaX2X
Aw8P07haRNJqFV2h6AdugcNEBqaiZPaQGtLhPVz5fwapoy3O6q00iS1q+vDFOJR5gXx4bLg4Tmv
12K3mHxGjXn1pTELMakGBSsOAwlaBQAweQGCSqGSIb3DQEHATAUBggqhkiG9w0DBwQIW4
aUAFC1riuAgcA0loE58jleXsrgiYAgM3eLjr9OgJV2vmhKP+xBdu5cg0yfBOIYlv5sAMF/h1YqFHw9N
RPBuFhHK//fuggot956LWQiMil9iEV7fcE5c46RBbA9shBSYQCdFe0xmY/paKTyswosXMLF341F
ZXeinCNTcrSYsqDef1v7jRtC5DUYD8MaWvHpIoSMZbHy3hT8/Fhrvdo4ft9dQUWGdvF8hD0j9rdz
XBnODkYOre2oTI/HRyilJwglMprbwK0bXDTsWOGggOHMIIDgzCCAuygAwIBAgIBADANBgkqhki
G9w0BAQUFADCBjJELMAkGA1UEBhMCVVMxCzAJBgNVBAGTAkNBMRywFAYDVQQHEw1Nb3VudGFpbWV3MRQwEgYDVQQKEwt
QYXlQYWwgSW5jLjETMBEGA1UECzQKbG12ZV9jZXJ0czERMA8GA1UEAxQIbG12ZV9hcGkxHDAaBgkqhkiG9w0BCQEWDXJlQHBheXBhbC5jb20wHhcN
MDQwMjEzMTAxMzE1WhcNMzUwMjEzMTAxMzE1WjCBjJELMAkGA1UEBhMCVVMxCzAJBgNVB
AgTAkNBMRywFAYDVQQHEw1Nb3VudGFpbWV3MRQwEgYDVQQKEwtQYXlQYWwgSW5jL
jETMBEGA1UECzQKbG12ZV9jZXJ0czERMA8GA1UEAxQIbG12ZV9hcGkxHDAaBgkqhkiG9w0BC
QEWDXJlQHBheXBhbC5jb20wgZ8wDQYJKoZlIhvcNAQEBBQADgY0AMIGJAoGBAMFHTt38RMx

LXJyO2SmS+Ndl72T7oKJ4u4uw+6awntALWh03PewmlJuzbALScsTS4sZoS1fKciBGoh11gIfHzylv
kdNe/hJl66/RGqrj5rFb08sAABNTzDTiQQNpJeBsYs/c2aiGozptX2RlnBktH+SUNpAajW724Nv2Wv
hif6sFAGmBAAGjge4wgeswHQYDVR0OBByEFJaffLvGbxe9WT9S1wob7BDWZJRrMIG7BgNVHSM
EgbMwgbCAFJaffLvGbxe9WT9S1wob7BDWZJRroYGUPIGRMIGOMQswCQYDVQQGEwJVUzELM
AkGA1UECBMCQ0ExFjAUBgNVBAcTDU1vdW50YWluIFZpZXcxFDASBgNVBAoTC1BheVBhbCBJ
bmMuMRMwEQYDVQQQLFApsaXZlX2NlcnRzMREwDwYDVQQDFAhSaXZlX2FwaTEcMBoGCSqGS
Ib3DQEJARYNcmVAcGF5cGFsLmNvbYIBADAMBgNVHRMEBTADAQH/MA0GCSqGSIb3DQEBB
QUAA4GBAIFfOlaagFr171+jq6OKidbWFSE+Q4FqROvdgIONth+8kSK//Y/4ihuE4Ymvzn5ceE3S/i
BSQQMjyvb+s2TWbQYDwcp129OPIbD9epdr4tJOUNiSojw7BHwYRiPh58S1xGIFgHFxwrEBb3dg
NbMUa+u4qectsMAXpVHnD9wlyfmHMYIBmjCCAZYCAQEwgZQwgY4xCzAJBgNVBAYTAIVTMQs
wCQYDVQQIEwJDQTEWMBQGA1UEBxMNTW91bnRhaW4gVmlldzEUMBIGA1UEChMLUGF5UG
FsIEluYy4xEzARBgNVBAsUCmxpdmVfY2VydHMxETAPBgNVBAMUCGxpdmVfYXBpMRwwGgYJK
oZlhvcNAQkBFglYzUBwYXlwYWwuY29tAgEAMAKGBSsOAwIaBQCgXTAYBgkqhkiG9w0BCQMxC
wYJKoZIhvcNAQcBMBwGCSqGSIb3DQEJBTEPFw0xMTA1MTAxODI3MzFaMCMGCSqGSIb3DQE
JBDEWBBSA6WnTs3o1HVhqLmpjyw84Wk0zkTANBgkqhkiG9w0BAQEFAASBgFavluaH02d+WtK
SNT17ec+WXzWsSA6cuh3k4riInrfNVotIvryPF15RQLSJAepD/ipSYOlwDyr4S6Sh9QIHGoAztyuFjw
gEPfGtYjULS8PxIEB7w9tltfgpUe8oB+E2+/OvM1bQwEvV2GFpGni2OMKs//RUD3eXqk1g2Qw8f+
J3-----END PKCS7-----

">
<input type="image" src="http://www.unseelie.org/coffee.gif" border="0" name="submit"
alt="PayPal - The safer, easier way to pay online!">

</form>

</CENTER>

</BODY>

</HTML>

END_HTML_END

CGI D&D Power Attack Calculator

```
#!/usr/bin/perl

# (c) 2008 by Scott David Gray

# Set initial HTML values

$mylocation = "http://www.unseelie.org/cgi-bin/powerattack.cgi" ;

$title = "D&D 3rd edition Power Attack damage estimator" ;

$firstline = "D&D 3rd edition Power Attack damage estimator:" ;

$rbgcolor = "99AABB" ;

$rfontcolor = "222288" ;

$rlinkcolor = "0000FF" ;

$rpastlinkcolor = "4422CC" ;

$rclicklinkcolor = "000000" ;

# Gather raw data

use CGI qw(:standard);

$basetohit = param("basetohit");

$basedamage = param("basedamage");

$powermultiplier = param("powermultiplier");

$critthreat = param("critthreat");

$basetoconfirm = param("basetoconfirm");

$critmult = param("critmult");

$minac = param("minac");

$maxac = param("maxac");

# Output

print "Content-type: text/html\nPragma: no-cache\n\n";

# HTML

print <<END_HTML;
```


<HTML>

<HEAD>

<TITLE>\${rtitle}</TITLE></HEAD>

<BODY BGCOLOR="\#\${rbgcolor}" TEXT="\#\${rfontcolor}" LINK="\#\${rlinkcolor}"
VLINK="\#\${rpastlinkcolor}" ALINK="\#\${rclicklinkcolor}">

<H2>\${rfirstline}</H2>

© 2008 by Scott David Gray.

<p>

<HR>

<P>

This program is designed to calculate average damage dealt in a round, depending on average damage from the weapon, the base to hit, and whether or not power attack is being used (and to what level) against various armor classes.

<P>

END_HTML

if (param()) {

print <<END_HTML2;

<HR>

A fighter who adds +\${basetohit} to hit with her/his primary attack who does average base damage of \$basedamage using a \$powermultiplier-handed weapon, with a crit range of \$critthreat-20/\$critmult and who adds +\${basetoconfirm} to confirm a crit, will do average damage according to the tables presented below, depending on the Armor Class of her/his opponent (from \$minac AC to \$maxac AC), and the number of points taken off of her/his to-hit roll for the power attack feat:

<P>

<HR>

<P>

<PRE>

END_HTML2

```

print <<END_PART_2;

One standard attack, no criticals:

END_PART_2

print ("power attack\t0\t1\t2\t3\t4\t5\n");

$AC = $minac;

until ($AC > $maxac) {

    print("AC\t$AC\t");

    $powerdeduct = 0;

    until ($powerdeduct > 5) {

        $prohibit = 20-($AC-$basetohit+$powerdeduct);

        if ($prohibit < 1) {

            $prohibit = 1

        }

        if ($prohibit > 19) {

            $prohibit = 19

        }

        $prohibit = ($prohibit/20) ;

        $damage = ($prohibit* (($powerdeduct * $powermultiplier)+$basedamage));

        $roundedfull = sprintf("%.2f", $damage);

        print (" $roundedfull\t");

        $powerdeduct++;

    }

    print("\n");

    $AC++;

}

print <<END_PART_3;

```

One standard attack, with criticals:

```
END_PART_3
```

```
print ("power attack\t0\t1\t2\t3\t4\t5\n");
```

```
$AC = $minac;
```

```
until ($AC > $maxac) {
```

```
    print("AC\t$AC\t");
```

```
    $powerdeduct = 0;
```

```
    until ($powerdeduct > 5) {
```

```
        $prohibit = 20-($AC-$basetohit+$powerdeduct);
```

```
        if ($prohibit < 1) {
```

```
            $prohibit = 1
```

```
        }
```

```
        if ($prohibit > 19) {
```

```
            $prohibit = 19
```

```
        }
```

```
        $critlikely = (21-$critthreat);
```

```
        if ($critlikely < 1) {
```

```
            $critlikely = 1
```

```
        }
```

```
        if ($critlikely > $prohibit) {
```

```
            $critlikely = $prohibit
```

```
        }
```

```
        $prohibit = ($prohibit/20) ;
```

```
        $damage = ($prohibit*($powerdeduct * $powermultiplier)+$basedamage);
```

```
        $probconfirm = 20-($AC-$basetoconfirm+$powerdeduct);
```

```
        if ($probconfirm < 1) {
```

```

    $probconfirm = 1
}
if ($probconfirm > 19) {
    $probconfirm = 19
}
$critconfirmed = ($probconfirm*$critlikely/400) ;
$critdamage = ($damage * ($critconfirmed) * ($critmult - 1));
$fulldamage = ($damage + $critdamage);
$roundedfull = sprintf("%.2f", $fulldamage);
print ("$roundedfull\t");
$powerdeduct++;
}
print("\n");
$AC++;
}
print <<END_PART_4;
One full attack (two attacks), no criticals:
END_PART_4
print ("power attack\t0\t1\t2\t3\t4\t5\n");
$AC = $minac;
until ($AC > $maxac) {
    print("AC\t$AC\t");
    $powerdeduct = 0;
    until ($powerdeduct > 5) {
        $probhit = 20-($AC-$basetohit+$powerdeduct);
        if ($probhit < 1) {

```

```

    $probhit = 1
}
if ($probhit > 19) {
    $probhit = 19
}
$probhit = ($probhit/20) ;
$probsecondhit = 25-($AC-$basetohit+$powerdeduct);
if ($probsecondhit < 1) {
    $probsecondhit = 1
}
if ($probsecondhit > 19) {
    $probsecondhit = 19
}
$probsecondhit = ($probsecondhit/20) ;
$probbothhits = ($probhit + $probsecondhit) ;
$damage = ($probbothhits*($powerdeduct * $powermultiplier)+$basedamage));
$roundedfull = sprintf("%.2f", $damage);
print (" $roundedfull\t");
$powerdeduct++;
}
print("\n");
$AC++;
}
print <<END_PART_5;
One full attack (two attacks), with criticals:
END_PART_5

```

```

print ("power attack\t0\t1\t2\t3\t4\t5\n");
$AC = $minac;
until ($AC > $maxac) {
    print("AC\t$AC\t");
    $powerdeduct = 0;
    until ($powerdeduct > 5) {
        $probhit = 20-($AC-$basetohit+$powerdeduct);
        if ($probhit < 1) {
            $probhit = 1
        }
        if ($probhit > 19) {
            $probhit = 19
        }
        $probsecondhit = 25-($AC-$basetohit+$powerdeduct);
        if ($probsecondhit < 1) {
            $probsecondhit = 1
        }
        if ($probsecondhit > 19) {
            $probsecondhit = 19
        }
        $critlikely = (21-$critthreat);
        if ($critlikely < 1) {
            $critlikely = 1
        }
        if ($critlikely > $probhit) {
            $critlikely = $probhit

```

```

}
$secondcritlikely = (21-$critthreat);
if ($secondcritlikely < 1) {
    $secondcritlikely = 1
}
if ($secondcritlikely > $probsecondhit) {
    $secondcritlikely = $probsecondhit
}
$probhit = ($probhit/20) ;
$damage = ($probhit* (($powerdeduct * $powermultiplier)+$basedamage));
$probconfirm = 20-($AC-$basetoconfirm+$powerdeduct);
if ($probconfirm < 1) {
    $probconfirm = 1
}
if ($probconfirm > 19) {
    $probconfirm = 19
}
$probsecondconfirm = 25-($AC-$basetoconfirm+$powerdeduct);
if ($probsecondconfirm < 1) {
    $probsecondconfirm = 1
}
if ($probsecondconfirm > 19) {
    $probsecondconfirm = 19
}
$critconfirmed = ($probconfirm*$critlikely/400) ;
$critdamage = ($damage * ($critconfirmed) * ($critmult - 1));

```

```

$secondcritconfirmed = ($probsecondconfirm*$secondcritlikely/400) ;
$secondcritdamage = ($damage * ($secondcritconfirmed) * ($critmult - 1));
$fulldamage = (($damage*2) + $critdamage + $secondcritdamage);
$roundedfull = sprintf("%.2f", $fulldamage);
print (" $roundedfull\t");
$powerdeduct++;
}
print("\n");
$AC++;
}
}
print <<END_HTML25;
</PRE>
END_HTML25
print <<END_HTML3;
<HR>
<P>
The form below allows you to submit numbers to the power attack program.
The numbers will be crunched on another machine.
<P>
<HR>
<FORM ACTION="\$mylocation\" METHOD=GET>
<H3>Data:</H3>
What is the character's total plus to hit with all modifiers included?
<INPUT NAME="\basetohit\">
<BR>
What is the average damage the character does with each swing?

```


<INPUT NAME=\"basedamage\">

What is the power multiplier on an attack (1 for 1-handed weapons, 2 for 2-handed weapons)?

<INPUT NAME=\"powermultiplier\">

What is the lowest natural roll for a crit threat?

<INPUT NAME=\"critthreat\">

What is the character's plus to confirm a crit, with all modifiers included?

<INPUT NAME=\"basetoconfirm\">

What is the damage multiplier for a critical?

<INPUT NAME=\"critmult\">

What is the minimum AC we should calculate?

<INPUT NAME=\"minac\">

What is the maximum AC we should calculate?

<INPUT NAME=\"maxac\">

<INPUT TYPE=\"submit\" VALUE=\"Calculate\">

</FORM>

<P>

<HR>

<P>

If you find this program to be useful, you will want to check out my

PERL Card Calculator program,</p>

PERL General Dice

Pool Calculator program,</p></div>
<div><p>and</p></div>
<div><p>PERL Shadowrun Dice Pool Calculator program.</p></div>
<div><p><P></p></div>
<div><p>The source code for this program can be found here.</p></div>
<div><p></FORM></p></div>
<div><p><HR></p></div>
<div><p><P></p></div>
<div><p><CENTER></p></div>
<div><p>If you find this program useful, please treat me to to a \$3 cup of coffee!!!</p></div>
<div><p>
</p></div>
<div><p><form action="https://www.paypal.com/cgi-bin/webscr" method="post"></p></div>
<div><p><input type="hidden" name="cmd" value="_s-xclick"></p></div>
<div><p><input type="hidden" name="encrypted" value="-----BEGIN PKCS7-----</p></div>
<div><p>MIHZwYJKoZlhvcNAQcEoIIHWDCCB1QCAQExggEwMIIBLAIBADCBjELMAkGA1UEBhMCVVMxCzAJBgNVBAGTAkNBMRywFAYDVQQHEw1Nb3VudGFpbWV3MRQwEgYDVQQKEwtQYXlQYWwgSW5jLjETMBEGA1UECzQKbG12ZV9jZXJ0czERMA8GA1UEAxQlbG12ZV9hcGkxHDAaBgdG9w0BCQEWDXJlQHBheXBhbC5jb20CAQAwDQYJKoZlhvcNAQEBAEgYAbpE+8xCb+nC8nwgVx1OtFerL+i2As0Ofv0yxeyMYHXs8tbM55DsQBofEXaMT6Gsy8qbC0FJs3BSeOaX2XAw8P07haRNJqFV2h6AdugcNEBqaiZPaQGtLhPVz5fwapoy3O6q00iS1q+vDFOJR5gXx4bLg4Tmv12K3mHxGjXn1pTELMakGBSSoAwIaBQAwgQGCSqGSIb3DQEHAUTAUBggqhkjG9w0DBwQIW4aUAFC1riuAgcA0loE58jIeXsrgiYAGM3eLjr9OgJV2vmhKP+xBdu5cg0yfBOIYlv5sAMF/h1YqFHw9NRPBuFhHK//fuggot956LWQiMi9iEV7fcE5c46RbBa9shBSYQCdFe0xmY/paKTyswosXMLF341FZXeinCNTcrSYsqDef1v7jRtC5DUYD8MaWvHpIoSMZbHy3hT8/Fhrvdo4ft9dQUWGdvF8hD0j9rdzXBnODkYOre2oTI/HRyilJjwglMprbwK0bXDTsWogggOHMIIDgzCCAuygAwIBAgIBADANBgdG9w0BAQUFADCBjELMAkGA1UEBhMCVVMxCzAJBgNVBAGTAkNBMRywFAYDVQQHEw1Nb3VudGFpbWV3MRQwEgYDVQQKEwtQYXlQYWwgSW5jLjETMBEGA1UECzQKbG12ZV9jZXJ0czERMA8GA1UEAxQlbG12ZV9hcGkxHDAaBgdG9w0BCQEWDXJlQHBheXBhbC5jb20wZDQYJKoZlhvcNAQEBAQADgY0AMIGJAoGBAMFHTt38RMxLXJyO2SmS+Ndl72T7oKJ4u4uw+6awntALWh03PewmIJuzbALScsTS4sZoS1fKciBGoh11gIfHzylvkdNe/hJl66/RGqrj5rFb08sAABNTzDTiqqNpJeBsYs/c2aiGozptX2RlnBktH+SUNpAajW724Nv2Wvhif6sFAGmBAAGjge4wgeswHQYDVR0OBBYEFJaffLvGbxe9WT9S1wob7BDWZJRrMIG7BgNVHSM EgbMwgbCAFJaffLvGbxe9WT9S1wob7BDWZJRroYGuPigRMIGOMQswCQYDVQQGEwJVUzELMAkGA1UECBMCQ0EwFjAUBgNVBACtDU1vdW50YWluIFZpZXcxZDASBgNVBAoTC1BheVBhbCBjbmMuMRMwEQYDVQQQLFApsaXZlX2NlcnRzMREwDwYDVQQDFAhSaXZlX2FwaTEcMBoGCSqGSIb3DQEJARYNcmVAcGF5cGFsLmNvbYIBADAMBgNVHRMEBTADAQH/MA0GCSqGSIb3DQEBB</p></div>
<div><p>26</p></div>

QUAA4GBAIFfOlaagFr171+jq6OKidbWFSE+Q4FqROvdgiONth+8kSK//Y/4ihuE4Ymvzn5ceE3S/i
BSQQMjyvb+s2TWbQYDwcp129OPibD9epdr4tJOUNiSojw7BHwYRiPh58S1xGlFgHFxwrEBb3dg
NbMUa+u4qectsMAXpVHnD9wIyfmHMYIBmjCCAZYCAQEwgZQwgY4xCzAJBgNVBAYTAIVTMQs
wCQYDVQQIEwJDQTEWMBQGA1UEBxMNTW91bnRhaW4gVmllZGEUMBIGA1UEChMLUGF5UG
FsIEluYy4xEzARBgNVBAsUCmxpdmVfY2VydHMxETAPBgNVBAMUCGxpdmVfYXBpMRwwGgYJK
oZIhvcNAQkBFglYzUBwYXlwYWwuY29tAgEAMakGBSsOAwIaBQCgXTAYBgkqhkiG9w0BCQMxC
wYJKoZIhvcNAQcBMBwGCsqGSib3DQEJBTEPFw0xMTA1MTAxODI3MzFaMCMGCSqGSib3DQE
JBDEWBBSA6WnTs3o1HVhqLmpjyw84Wk0zkTANBgkqhkiG9w0BAQEFAASBgFavIuaH02d+WtK
SNT17ec+WXzWsSA6cuh3k4riInrfNVotIvryPF15RQLSJAepD/ipSYOlwDyr4S6Sh9QIHGoAztyuFjw
gEPfGtYjULS8PxIEB7w9tltfgpUe8oB+E2+/OvM1bQwEvV2GFpGni2OMKs//RUD3eXqk1g2Qw8f+
J3-----END PKCS7-----

```
">  
<input type="image" src="http://www.unseelie.org/coffee.gif" border="0" name="submit"  
alt="PayPal - The safer, easier way to pay online!">  
  
</form>
```

```
</CENTER>  
  
</BODY>  
  
</HTML>  
  
END_HTML3
```

CGI Shadowrun Dice Pool Calculator

```
#!/usr/bin/perl

# (c) 2000 by Scott David Gray

# Set initial HTML values

$mylocation = "http://www.unseelie.org/cgi-bin/shadow.cgi" ;

$title = "Scott Gray's Shadowrun Dice Pool Calculator" ;

$firstline = "Scott Gray's Shadowrun Dice Pool Calculator" ;

$rbgcolor = "558855" ;

$rfontcolor = "000000" ;

$rlinkcolor = "000000" ;

$rpastlinkcolor = "224444" ;

$rclicklinkcolor = "222222" ;

# Gather raw data

use CGI qw(:standard);

$number = param("number");

$target = param("target");

$sides = 6;

$cumulate = param("cumulus");

$targeorig = $target;

# Calculate open-ended:

$targmod = $target;

until ($targmod <= 6) {

    $targmod = ($targmod-6);

    $sides = ($sides * 6);

}

$target = ($sides - (6 - $targmod));
```

```

# Calculate things

if ($cumulate=="1") {
    $cume=" (cumulative)";
}

elseif ($cumulate=="0") {
    $cume=" (non-cumulative)";
}

else {
    $cume=" (both cumulative and non-cumulative)"; }

# Output

print "Content-type: text/html\nPragma: no-cache\n\n";

# HTML

print <<END_HTML;

<HTML>

<HEAD>

<META NAME="description" CONTENT="A cgi program to calculate dice pools for
the Shadowrun rpgs.">

<META NAME="keywords" CONTENT="die dice pool pools Shadowrun rpg roleplaying
game free">

<TITLE>${rtitle}</TITLE></HEAD>

<BODY BGCOLOR="\#$rbgcolor\" TEXT="\#$rfontcolor\" LINK="\#$rlinkcolor\"
VLINK="\#$rpastlinkcolor\" ALINK="\#$rclicklinkcolor\">

<H2>${rfirstline}</H2>

<p>

This program is &copy; 2000 by <a href="\http://www.unseelie.org/">Scott
David Gray</A>.

<p>

This program is designed to calculate probabilities when using a <a
href="\http://www.fasa.com/Shadowrun">Shadowrun</a> open-ended dice pool.

```

<p>

Dice pools are used in role playing games such as Shadowrun. A dice pool is used by rolling a number of dice and, rather than adding them together, comparing the rolls to a <i>target number</i> and counting <i>how many</i> dice meet that target. In Shadowrun, dice are open-ended; if a die rolls a six it is added to another six sided die (which, in turn, is open ended, etc.). If all of the dice roll one, the result is a <i>critical failure</i>.

<p>

END_HTML

```
if ($number>0 && $number<1000 && $target>1) {
```

```
print <<END_HTML_2;
```

Here are the figures\$come for \$number open-ended dice rolled against a target number of \$targeorig:

<p>

END_HTML_2

```
$an1=0;
```

```
$av=0;
```

```
# Probability of success:
```

```
$pst=($sides - $target + 1) / $sides;
```

```
# Probability of failure:
```

```
$pft=($target-1) / $sides;
```

```
# Countdown from number of dice to zero
```

```
for ( $m=$number ; $m>0 ; $m-- ) {
```

```
$nm=($number-$m);
```

```
$n1=1;
```

```
for ($counter=1;$counter<($number+1);$counter++) {
```

```
$n1*=$counter;
```

```
}
```

```

$m1=1;
for ($counter=1;$counter<($m+1);$counter++) {
    $m1*=$counter;
}
$nm1=1;
for ($counter=1;$counter<($nm+1);$counter++) {
    $nm1*=$counter;
}
$ps=1;
for ($counter=1;$counter<($m+1);$counter++) {
    $ps*=$pst;
}
$pf=1;
for ($counter=1;$counter<($nm+1);$counter++) {
    $pf*=$pft;
}
# Calculate C(N, M)
$cnm=$n1/($nm1 * $m1);
# Calculate actual probability of success
$an=$cnm*$ps*$pf;
# Add to cumulative average of successes
$av+=$( $an*$m);
$an1+=$an;
if ($cumulate==0 || $cumulate==2) {
if ($m > 1) {
$val=($an*100);

```

```

printf("The probability of $m successes is $val");
printf("<br>")
}
if ($m < 2) {
$val=($an*100);
printf("The probability of $m success is $val");
printf("<br>")
}
}
if ($cumulate==1 || $cumulate==2) {
if ($m > 1) {
$val=($an1*100);
printf("The probability of $m successes or more is $val");
printf("<br>")
}
if ($m < 2) {
$val=($an1*100);
printf("The probability of $m success or more is $val");
printf("<br>")
}
}
if ($m==1) {
$no1=((1-$an1)*100);
printf("The probability of no successes is $no1");
$nooo=1;
for ( $u1=$number ; $u1>0 ; $u1-- ) {

```



```

$nooo=($nooo/6);
}
$nooo=($nooo*100);
printf("<br>");
printf("The probability of a critical failure is $nooo");
}
}
} else {
print <<END_HTML_BAD;

```

When entering the fields, be sure that the number of dice you enter is greater than zero, and that the target number you enter is greater than 1.

```

END_HTML_BAD

```

```

}
print <<END_HTML_END;
<br>
<p>
and here is the form itself:
<br>
<p>
<FORM ACTION="\$mylocation\" METHOD="\get\">
<br>
Number of dice to be thrown: <INPUT name="\number\">
<br>
Target number: <INPUT name="\target\">
<p>
<INPUT type="\radio\" name="\cumulus\" value="\0\">Not cumulative
<br>

```

<INPUT type="radio" name="cumulus" value="1">Cumulative

<INPUT type="radio" name="cumulus" value="2">Both cumulative and not cumulative

<p>

<INPUT type="submit" name="action" value="Press once to send">

<INPUT type="reset">

<P>

<HR>

This program was designed (and the math calculated) by Scott David Gray, from the Sudbury Valley School.

<P>

<HR>

If you find this program to be useful, you will want to check out my

PERL Card Calculator program,

and

PERL General Dice Pool Calculator program.

<P>

Click here for a copy of this program.

</FORM>

<P>

<HR>

<P>

<CENTER>

If you find this program useful, please treat me to a \ \$3 cup of coffee!!!


```
<form action="https://www.paypal.com/cgi-bin/webscr" method="post">
<input type="hidden" name="cmd" value="_s-xclick">
<input type="hidden" name="encrypted" value="-----BEGIN PKCS7-----
MIIHZwYJKoZlIhvcNAQcEoIIHWDCCB1QCAQExggEwMIIBLAIBADCBIDCBjjELMAkGA1UEBhMC
VVMxCzAJBgNVBAGTAkNBMRywFAYDVQQHEw1Nb3VudGFpbiBwaWV3MRQwEgYDVQQKEwt
QYXIQYwWgSW5jLjETMBEGA1UECzQKbG12ZV9jZXJ0czERMA8GA1UEAxQlG12ZV9hcGkxHDA
aBqkqhkiG9w0BCQEWDXJlQHBheXBhbC5jb20CAQAwDQYJKoZlIhvcNAQEBBQAEgYAbpE+8xC
b+nC8nwgVx1OtFerL+i2As0Ofv0yxeoYMyHXs8tbM55DsQBofEXaMT6Gsy8qbC0FJs3BSeOaX2X
Aw8P07haRNJqFV2h6AdugcNEBqaiZPaQGtLhPVz5fwapoy3O6q00iS1q+vDFOJR5gXx4bLg4Tmv
12K3mHxGjXn1pTELMakGBSsOAwIaBQAweGQCSqGSIb3DQEHATAUBggqhkiG9w0DBwQIw4
aUAFC1riuAgcA0loE58jIeXsrgiYAgM3eLjr9OgJV2vmhKP+xBdu5cg0yfBOIYlv5sAMF/h1YqFHw9N
RPBuFhHK//fuggot956LWQiMi9iEV7fcE5c46RBBa9shBSYQCdFe0xmY/paKTyswosXMLF341F
ZXeinCNTcrSYsqDef1v7jRtC5DUYD8MaWvHpIoSMZbHy3hT8/Fhrvdo4fT9dQUWgdvF8hD0j9rdz
XBnODkYOre2oTI/HRyilJjwglMprbwK0bXDTsWOgggOHMIIDgzCCAuygAwIBAgIBADANBqkqhki
G9w0BAQUFADCBjjELMAkGA1UEBhMCVVMxCzAJBgNVBAGTAkNBMRywFAYDVQQHEw1Nb3VudGFpbiBwaWV3MRQwEgYDVQQKEwt
QYXIQYwWgSW5jLjETMBEGA1UECzQKbG12ZV9jZXJ0czERMA8GA1UEAxQlG12ZV9hcGkxHDAaBqkqhkiG9w0BCQEWDXJlQHBheXBhbC5jb20wHhcN
MDQwMjEzMTAxMzE1WhcNMzUwMjEzMTAxMzE1WjCBjjELMAkGA1UEBhMCVVMxCzAJBgNVB
AgTAkNBMRywFAYDVQQHEw1Nb3VudGFpbiBwaWV3MRQwEgYDVQQKEwtQYXIQYwWgSW5jL
jETMBEGA1UECzQKbG12ZV9jZXJ0czERMA8GA1UEAxQlG12ZV9hcGkxHDAaBqkqhkiG9w0BC
QEWDXJlQHBheXBhbC5jb20wZ8wDQYJKoZlIhvcNAQEBBQADgY0AMIGJAoGBAMFHTt38RMx
LXJyO2SmS+Ndl72T7oKJ4u4uw+6awntALWh03PewmIJuzbALScsTS4sZoS1fKciBGoh11gIfHzylv
kdNe/hJl66/RGqrj5rFb08sAABNTzDTiqqNpJeBsYs/c2aiGozptX2RlnBktH+SUNpAajW724Nv2Wv
hif6sFAGmBAAGjge4wgeswHQYDVR0OBBYEFJaffLvGbxe9WT9S1wob7BDWZJRrMIG7BgNVHSM
EgbMwgbCAFJaffLvGbxe9WT9S1wob7BDWZJRroYgUpIGRMIGOMQswCQYDVQQGEwJVUzELM
AkGA1UECBMCQ0ExFjAUBgNVBACjTDU1vdW50YWluIFZpZXcxZDASBgNVBAoTC1BheVBhbCBj
bmMuMRMwEgYDVQQQLFapsaXZlX2NlcnRzMREwDwYDVQQDFAhsaXZlX2FwaTEcMBoGCSqGS
Ib3DQEJARYNcmVAcGF5cGFsLmNvbYIBADAMBgNVHRMEBTADAQH/MA0GCSqGSIb3DQEBB
QUAA4GBAIFfOlaagFr171+jq6OKidbWFSE+Q4FqROvdglONth+8kSK//Y/4ihuE4Ymvzn5ceE3S/i
BSQQMjyvb+s2TWbQYDwcp129OPIbD9epdr4tJOUNiSojw7BHwYRiPh58S1xGIfgHFxwREBb3dg
NbMUa+u4qectsMAXpVHnD9wlyfmHMYIBmjCCAZYCAQEwgZQwgY4xCzAJBgNVBAYTAIVTMQs
wCQYDVQQIEwJDQTEWMBQGA1UEBxMNTW91bnRhaW4gVmllZzEUMBIGA1UEChMLUGF5UG
FsIEluYy4xEzARBgNVBAsUCmxdmVfy2VydHMxETAPBgNVBAMUCGxpdmVfyXBpMRwwGgYJK
oZlIhvcNAQkBFglYzUBwYXlwYwYy29tAgEAMakGBSsOAwIaBQCgXTAYBgkqhkiG9w0BCQMxC
wYJKoZlIhvcNAQcBMBwGCSqGSIb3DQEJBTEPFw0xMTA1MTAxODI3MzFaMCMGCSqGSIb3DQE
JBDEWBBSA6WnTs3o1HVhqLmpjyw84Wk0zkTANBgkqhkiG9w0BAQEFAASBgFavluaH02d+WtK
SNTI7ec+WXzWsSA6cuh3k4riInrfNVotIvryPF15RQLSJAepD/ipSYOlwDyr4S6Sh9QIHGoAztyuFjw
gEPfGtYjULS8PxIEB7w9tltfgpUe8oB+E2+/OvM1bQwEvV2GFpGni2OMKs//RUD3eXqk1g2Qw8f+
J3-----END PKCS7-----
">
<input type="image" src="http://www.unseelie.org/coffee.gif" border="0" name="submit"
alt="PayPal - The safer, easier way to pay online!">

</form>

</CENTER>
```

</BODY>

</HTML>

END_HTML_END