

Justify

15) $n+1+n=3$

$2n+1=3$

$2n+0=2$

$\frac{2n}{2} = \frac{2}{2}$

$n=1$

$n=1$

Given
Combine Like Terms
Sub. Prop. of Eq.
Ident. Prop. of Add.
Division Prop. of Eq.
Ident. Prop. of Mult.

Verify: $1+1+1=3$
 $3=3$ True

17) $4(5r-2)=52$

$20r-8=52$

$20r+0=60$

$20r=60$

$\frac{20r}{20} = \frac{60}{20}$

$r=3$

$r=3$

Given
Distrib. Prop.
Add. Prop. of Eq.
Ident. Prop. of Add.
Divis. Prop. of Eq.
Ident. Prop. of Mult.

Verify: $4(5(3)-2) = 4(15-2) = 4(13) = 52$
True

19) $5b+11=5b-(1+4b)$

$5b+11=5b-1-4b$

$5b+11=1b-1$

$4b+11=0-1$

$4b+11=-1$

$4b+0=-12$

$4b=-12$

$\frac{4b}{4} = \frac{-12}{4}$

$b=-3$

$b=-3$

Given
Distrib. Prop.
Combine Like Terms
Sub. Prop. of Eq.
Ident. Prop. of Add.
Sub. Prop. of Eq.
Ident. Prop. of Add.
Div. Prop. of Eq.
Ident. Prop. of Mult.

Verify: $5(-3)+11 = 5(-3) - (1+4(-3)) \Rightarrow -4 = -4$ true

Solve each inequality and graph its solution. Justify solutions.

21) $2 > \frac{r+5}{4}$



$2 > \frac{r+5}{4}$

$8 > (r+5)$

$8 > r+5$

$3 > r+0$

$3 > r$

Given
Mult. Prop. of Ineq.
Ident. Prop. of Mult.
Sub. Prop. of Ineq.
Ident. Prop. of Add.

16) $5(2+4m)=-90$

$10+20m=-90$

$0+20m=-100$

$\frac{20m}{20} = \frac{-100}{20}$

$m=-5$

$m=-5$

Given
Distributive Property
Sub. Prop. of Eq.
Ident. Prop. of Add.
Div. Prop. of Eq.
Ident. Prop. of Mult.

Verify: $5(2+4(-5)) = -90$
 $5(2-20) = 5(-18) = -90$ true

18) $2x+9=5x-3$

$0+9=3x-3$

$9=3x-3$

$12=3x+0$

$\frac{12}{3} = \frac{3x}{3}$

$4=1x$

$4=x$

Given
Sub. Prop. of Eq.
Ident. Prop. of Add.
Add. Prop. of Eq.
Ident. Prop. of Add.
Div. Prop. of Eq.
Ident. Prop. of Mult.

Verify: $2(4)+9 = 5(4)-3$
 $8+9 = 20-3$
 $17 = 17$ true

20) $-4(4+2v)=2-5(1-v)$

$-16-8v=2-5+5v$

$-16-8v=-3+5v$

$-16+0=-3+13v$

$-16=-3+13v$

$-13=0+13v$

$-13=13v$

$\frac{-13}{13} = \frac{13v}{13}$

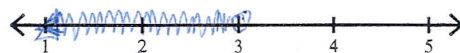
$-1=v$

$-1=v$

Given
Distrib. Prop.
Combine Like Terms
Add. Prop. of Eq.
Ident. Prop. of Add.
Add. Prop. of Eq.
Ident. Prop. of Add.
Div. Prop. of Eq.
Ident. Prop. of Mult.

Verify: $-4(4+2(-1)) = 2-5(1-(-1))$
 $-8 = -8$ True

22) $-1 < 5-2n$



$-1 < 5-2n$

$-6 < -2n$

$-6 < -2n$

$3 > n$

$3 > n$

Given
Sub. Prop. of Ineq.
Ident. Prop. of Add.
Div. Prop. of Ineq.
Ident. Prop. of Mult.