Kuta Software - Infinite Algebra 2 Name_____

Function Inverses

Date_____ Period____

State if the given functions are inverses.

1) $g(x) = 4 - \frac{3}{2}x$

$f(x) = \frac{1}{2}x + \frac{3}{2}$

2) $g(n) = \frac{-12 - 2n}{3}$

$f(n) = \frac{-5 + 6n}{5}$

3) $f(n) = \frac{-16 + n}{4}$

$g(n) = 4n + 16$

4) $f(x) = -\frac{4}{7}x - \frac{16}{7}$

$g(x) = \frac{3}{2}x - \frac{3}{2}$

5) $f(n) = -(n + 1)^3$

$g(n) = 3 + n^3$

6) $f(n) = 2(n - 2)^3$

$g(n) = \frac{4 + \sqrt[3]{4n}}{2}$

7) $f(x) = \frac{4}{-x - 2} + 2$

$h(x) = -\frac{1}{x + 3}$

8) $g(x) = -\frac{2}{x} - 1$

$f(x) = -\frac{2}{x + 1}$

Find the inverse of each function.

9) $h(x) = \sqrt[3]{x} - 3$

10) $g(x) = \frac{1}{x} - 2$

11) $h(x) = 2x^3 + 3$

12) $g(x) = -4x + 1$

13) $g(x) = \dfrac{7x + 18}{2}$

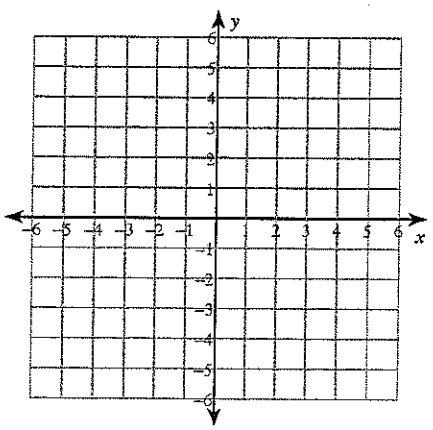
14) $f(x) = x + 3$

15) $f(x) = -x + 3$

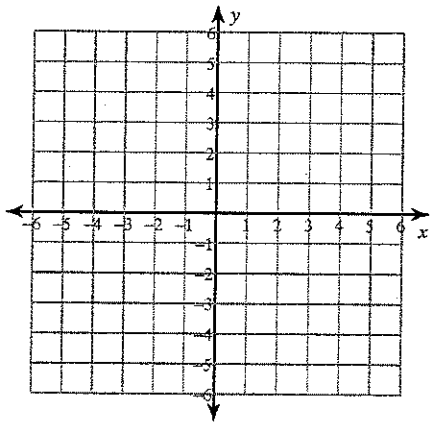
16) $f(x) = 4x$

Find the inverse of each function. Then graph the function and its inverse.

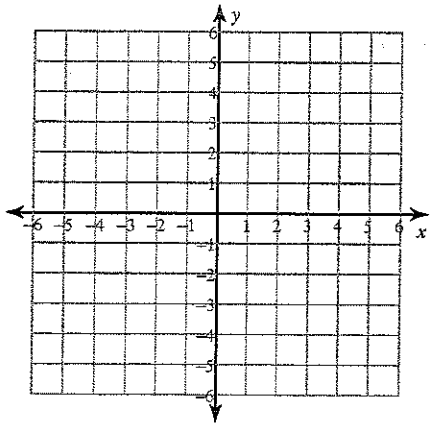
17) $f(x) = -1 - \dfrac{1}{5}x$



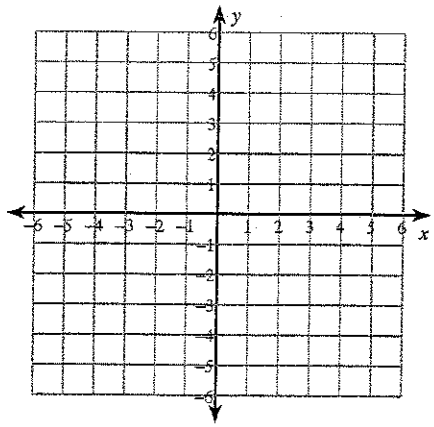
18) $g(x) = \dfrac{1}{x - 1}$



19) $f(x) = -2x^3 + 1$



20) $g(x) = \dfrac{-x - 5}{3}$



Kuta Software - Infinite Algebra 2

Name_____

Function Inverses

Date_____ Period____

State if the given functions are inverses.

1) $g(x) = 4 - \frac{3}{2}x$

$f(x) = \frac{1}{2}x + \frac{3}{2}$

No

2) $g(n) = \frac{-12 - 2n}{3}$

$f(n) = \frac{-5 + 6n}{5}$

No

3) $f(n) = \frac{-16 + n}{4}$

$g(n) = 4n + 16$

Yes

4) $f(x) = -\frac{4}{7}x - \frac{16}{7}$

$g(x) = \frac{3}{2}x - \frac{3}{2}$

No

5) $f(n) = -(n+1)^3$

$g(n) = 3 + n^3$

No

6) $f(n) = 2(n-2)^3$

$g(n) = \frac{4 + \sqrt[3]{4n}}{2}$

Yes

7) $f(x) = \frac{4}{-x-2} + 2$

$h(x) = -\frac{1}{x+3}$

No

8) $g(x) = -\frac{2}{x} - 1$

$f(x) = -\frac{2}{x+1}$

Yes

Find the inverse of each function.

9) $h(x) = \sqrt[3]{x} - 3$

$h^{-1}(x) = (x+3)^3$

10) $g(x) = \frac{1}{x} - 2$

$g^{-1}(x) = \frac{1}{x+2}$

11) $h(x) = 2x^3 + 3$

$h^{-1}(x) = \sqrt[3]{\frac{x-3}{2}}$

12) $g(x) = -4x + 1$

$g^{-1}(x) = -\frac{1}{4}x + \frac{1}{4}$

13) $g(x) = \dfrac{7x + 18}{2}$

$g^{-1}(x) = \dfrac{2x - 18}{7}$

14) $f(x) = x + 3$

$f^{-1}(x) = x - 3$

15) $f(x) = -x + 3$

$f^{-1}(x) = -x + 3$

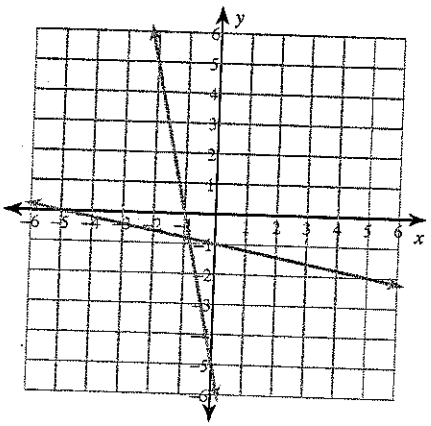
16) $f(x) = 4x$

$f^{-1}(x) = \dfrac{x}{4}$

Find the inverse of each function. Then graph the function and its inverse.

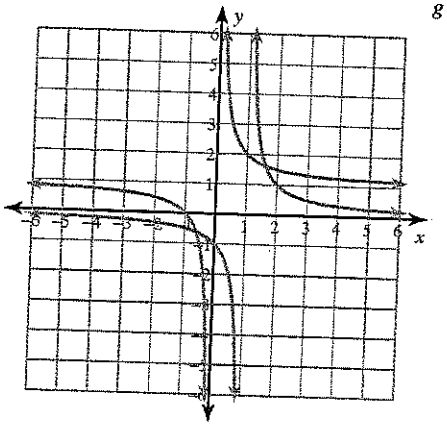
17) $f(x) = -1 - \dfrac{1}{5}x$

$f^{-1}(x) = -5x - 5$



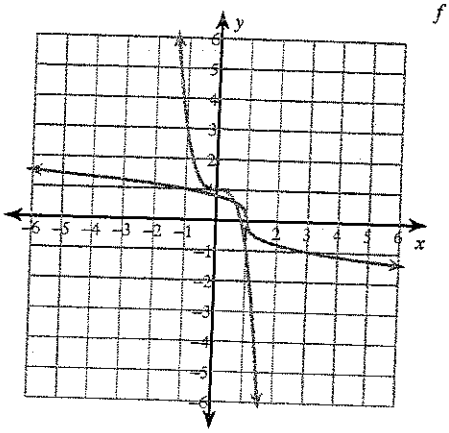
18) $g(x) = \dfrac{1}{x - 1}$

$g^{-1}(x) = \dfrac{1}{x} + 1$



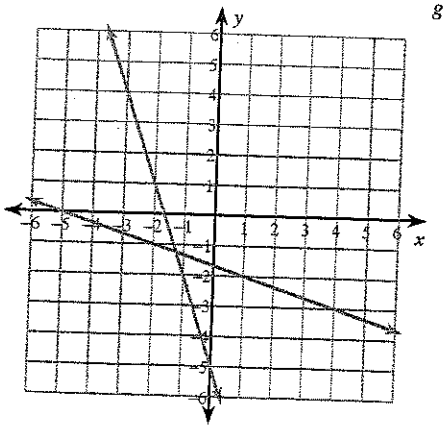
19) $f(x) = -2x^3 + 1$

$f^{-1}(x) = \sqrt[3]{\dfrac{-x + 1}{2}}$



20) $g(x) = \dfrac{-x - 5}{3}$

$g^{-1}(x) = -3x - 5$



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Kuta Software - Infinite Algebra 2

Name_____

Function Operations

Date_____ Period____

Perform the indicated operation.

1) $g(n) = n^2 + 4 + 2n$
$h(n) = -3n + 2$
Find $(g \cdot h)(1)$

2) $f(x) = 4x - 3$
$g(x) = x^3 + 2x$
Find $(f - g)(4)$

3) $h(x) = 3x + 3$
$g(x) = -4x + 1$
Find $(h + g)(10)$

4) $g(a) = 3a + 2$
$f(a) = 2a - 4$
Find $\left(\frac{g}{f}\right)(3)$

5) $g(x) = 2x - 5$
$h(x) = 4x + 5$
Find $g(3) - h(3)$

6) $g(a) = 2a - 1$
$h(a) = 3a - 3$
Find $(g \cdot h)(-4)$

7) $g(t) = t^2 + 3$
$h(t) = 4t - 3$
Find $(g \cdot h)(-1)$

8) $g(n) = 3n + 2$
$f(n) = 2n^2 + 5$
Find $g(f(2))$

9) $g(x) = -x^2 - 1 - 2x$
$f(x) = x + 5$
Find $(g - f)(x)$

10) $f(x) = 3x - 1$
$g(x) = x^2 - x$
Find $\left(\frac{f}{g}\right)(x)$

11) $g(a) = -3a - 3$
$f(a) = a^2 + 5$
Find $(g - f)(a)$

12) $h(t) = 2t + 1$
$g(t) = 2t + 2$
Find $(h - g)(t)$

13) $f(x) = 2x^3 - 5x^2$
$g(x) = 2x - 1$
Find $(f \cdot g)(x)$

14) $h(n) = 4n + 5$
$g(n) = 3n + 4$
Find $(h - g)(n)$

15) $g(a) = -3a^2 - a$
$h(a) = -2a - 4$
Find $\left(\frac{g}{h}\right)(a)$

16) $f(n) = 2n$
$g(n) = -n - 4$
Find $(f \circ g)(n)$

17) $h(a) = 3a$
$g(a) = -a^3 - 3$
Find $\left(\frac{h}{g}\right)(a)$

18) $g(n) = 2n + 3$
$h(n) = n - 1$
Find $(g \circ h)(n)$

19) $h(x) = x^2 - 2$
$g(x) = 4x + 1$
Find $(h \circ g)(x)$

20) $g(t) = 2t + 5$
$f(t) = -t^2 + 5$
Find $(g + f)(t)$

21) $g(x) = 2x - 2$
$f(x) = x^2 + 3x$
Find $(g \circ f)(-2 + x)$

22) $g(a) = 2a + 2$
$h(a) = -2a - 5$
Find $(g \circ h)(-4 + a)$

Kuta Software - Infinite Algebra 2

Name_____

Date_____ Period____

Function Operations

Perform the indicated operation.

1) $g(n) = n^2 + 4 + 2n$
$h(n) = -3n + 2$
Find $(g \cdot h)(1)$

-7

2) $f(x) = 4x - 3$
$g(x) = x^3 + 2x$
Find $(f - g)(4)$

-59

3) $h(x) = 3x + 3$
$g(x) = -4x + 1$
Find $(h + g)(10)$

-6

4) $g(a) = 3a + 2$
$f(a) = 2a - 4$
Find $\left(\frac{g}{f}\right)(3)$

$\frac{11}{2}$

5) $g(x) = 2x - 5$
$h(x) = 4x + 5$
Find $g(3) - h(3)$

-16

6) $g(a) = 2a - 1$
$h(a) = 3a - 3$
Find $(g \cdot h)(-4)$

135

7) $g(t) = t^2 + 3$
$h(t) = 4t - 3$
Find $(g \cdot h)(-1)$

-28

8) $g(n) = 3n + 2$
$f(n) = 2n^2 + 5$
Find $g(f(2))$

41

9) $g(x) = -x^2 - 1 - 2x$
$f(x) = x + 5$
Find $(g - f)(x)$

$-x^2 - 3x - 6$

10) $f(x) = 3x - 1$
$g(x) = x^2 - x$
Find $\left(\frac{f}{g}\right)(x)$

$\frac{3x - 1}{x^2 - x}$

11) $g(a) = -3a - 3$
$f(a) = a^2 + 5$
Find $(g - f)(a)$

$-a^2 - 3a - 8$

12) $h(t) = 2t + 1$
$g(t) = 2t + 2$
Find $(h - g)(t)$

-1

13) $f(x) = 2x^3 - 5x^2$
$g(x) = 2x - 1$
Find $(f \cdot g)(x)$

$4x^4 - 12x^3 + 5x^2$

14) $h(n) = 4n + 5$
$g(n) = 3n + 4$
Find $(h - g)(n)$

$n + 1$

15) $g(a) = -3a^2 - a$
$h(a) = -2a - 4$
Find $\left(\frac{g}{h}\right)(a)$

$\frac{-3a^2 - a}{-2a - 4}$

16) $f(n) = 2n$
$g(n) = -n - 4$
Find $(f \circ g)(n)$

$-2n - 8$

17) $h(a) = 3a$
$g(a) = -a^3 - 3$
Find $\left(\frac{h}{g}\right)(a)$

$\frac{3a}{-a^3 - 3}$

18) $g(n) = 2n + 3$
$h(n) = n - 1$
Find $(g \circ h)(n)$

$2n + 1$

19) $h(x) = x^2 - 2$
$g(x) = 4x + 1$
Find $(h \circ g)(x)$

$16x^2 + 8x - 1$

20) $g(t) = 2t + 5$
$f(t) = -t^2 + 5$
Find $(g + f)(t)$

$-t^2 + 2t + 10$

21) $g(x) = 2x - 2$
$f(x) = x^2 + 3x$
Find $(g \circ f)(-2 + x)$

$2x^2 - 2x - 6$

22) $g(a) = 2a + 2$
$h(a) = -2a - 5$
Find $(g \circ h)(-4 + a)$

$-4a + 8$

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Name_____

Solving Quadratic Equations By Completing the Square

Date_____ Period____

Solve each equation by completing the square.

1) $p^2 + 14p - 38 = 0$

2) $v^2 + 6v - 59 = 0$

3) $a^2 + 14a - 51 = 0$

4) $x^2 - 12x + 11 = 0$

5) $x^2 + 6x + 8 = 0$

6) $n^2 - 2n - 3 = 0$

7) $x^2 + 14x - 15 = 0$

8) $k^2 - 12k + 23 = 0$

9) $r^2 - 4r - 91 = 7$

10) $x^2 - 10x + 26 = 8$

11) $k^2 - 4k + 1 = -5$

12) $b^2 + 2b = -20$

13) $v^2 - 6v = -91$

14) $n^2 = 18n + 40$

15) $5k^2 = 60 - 20k$

16) $6x^2 - 48 = -12x$

17) $8x^2 + 16x = 42$

18) $9n^2 + 79 = -18n$

19) $2a^2 = -6 + 8a$

20) $2x^2 - 5x + 67 = 0$

21) $4n^2 + 4n + 36 = 0$

22) $7k^2 - 16k + 100 = 0$

23) $10p^2 + 4p + 77 = 9$

24) $3x^2 = -4 + 8x$

Name_____

Solving Quadratic Equations By Completing the Square

Date_____ Period____

Solve each equation by completing the square.

1) $p^2 + 14p - 38 = 0$

$\{-7 + \sqrt{87}, -7 - \sqrt{87}\}$

2) $v^2 + 6v - 59 = 0$

$\{-3 + 2\sqrt{17}, -3 - 2\sqrt{17}\}$

3) $a^2 + 14a - 51 = 0$

$\{3, -17\}$

4) $x^2 - 12x + 11 = 0$

$\{11, 1\}$

5) $x^2 + 6x + 8 = 0$

$\{-2, -4\}$

6) $n^2 - 2n - 3 = 0$

$\{3, -1\}$

7) $x^2 + 14x - 15 = 0$

$\{1, -15\}$

8) $k^2 - 12k + 23 = 0$

$\{6 + \sqrt{13}, 6 - \sqrt{13}\}$

9) $r^2 - 4r - 91 = 7$

$\{2 + \sqrt{102}, 2 - \sqrt{102}\}$

10) $x^2 - 10x + 26 = 8$

$\{5 + \sqrt{7}, 5 - \sqrt{7}\}$

11) $k^2 - 4k + 1 = -5$

$\{2 + i\sqrt{2}, 2 - i\sqrt{2}\}$

12) $b^2 + 2b = -20$

$\{-1 + i\sqrt{19}, -1 - i\sqrt{19}\}$

13) $v^2 - 6v = -91$

$\{3 + i\sqrt{82}, 3 - i\sqrt{82}\}$

14) $n^2 = 18n + 40$

$\{20, -2\}$

15) $5k^2 = 60 - 20k$

$\{2, -6\}$

16) $6x^2 - 48 = -12x$

$\{2, -4\}$

17) $8x^2 + 16x = 42$

$\left\{\frac{3}{2}, -\frac{7}{2}\right\}$

18) $9n^2 + 79 = -18n$

$\left\{\frac{-3 + i\sqrt{70}}{3}, \frac{-3 - i\sqrt{70}}{3}\right\}$

19) $2a^2 = -6 + 8a$

$\{3, 1\}$

20) $2x^2 - 5x + 67 = 0$

$\left\{\frac{5 + i\sqrt{511}}{4}, \frac{5 - i\sqrt{511}}{4}\right\}$

21) $4n^2 + 4n + 36 = 0$

$\left\{\frac{-1 + i\sqrt{35}}{2}, \frac{-1 - i\sqrt{35}}{2}\right\}$

22) $7k^2 - 16k + 100 = 0$

$\left\{\frac{8 + 2i\sqrt{159}}{7}, \frac{8 - 2i\sqrt{159}}{7}\right\}$

23) $10p^2 + 4p + 77 = 9$

$\left\{\frac{-1 + 13i}{5}, \frac{-1 - 13i}{5}\right\}$

24) $3x^2 = -4 + 8x$

$\left\{2, \frac{2}{3}\right\}$

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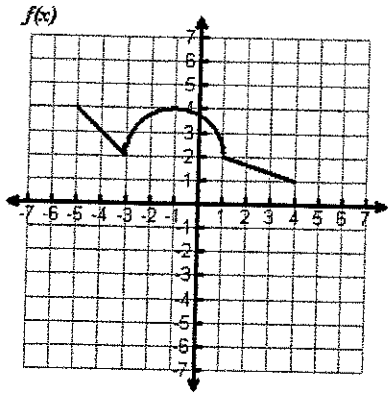
Graph Transformation Worksheet #2

Name:_____

Given the graph of f(x), graph each new function and state the transformations.



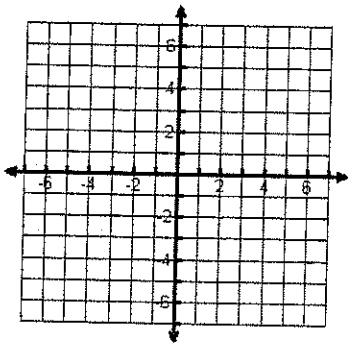
State the Domain and Range of *f(x)*

Domain: _____

Range: _____

1) $f(x+1)-3$

Trans:

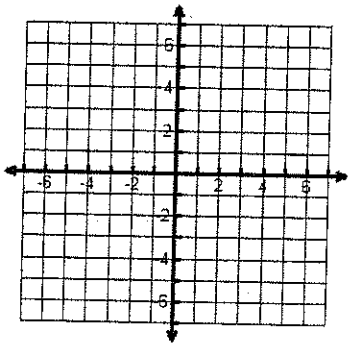


Domain: _____

Range: _____

2) $-f(x)+2$

Trans:

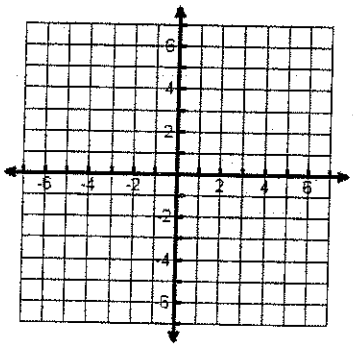


Domain: _____

Range: _____

3) $2f(-x)-3$

Trans:

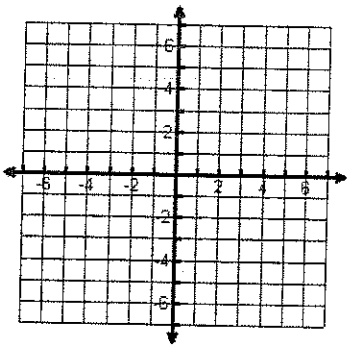


Domain: _____

Range: _____

4) $\frac{1}{2}f(x+1)-2$

Trans:

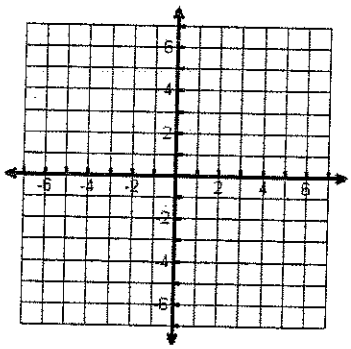


Domain: _____

Range: _____

5) $f(-(x-1))+3$

Trans:

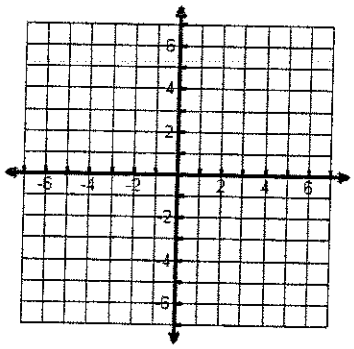


Domain: _____

Range: _____

6) $-2f(x-1)-3$

Trans:



Domain: _____

Range: _____

State the transformations. Do not graph.

7) $4f(x-7)+12$

8) $\frac{1}{5}f(x+11)-20$

9) $-5f(x)+15$

10) $\frac{1}{3}f(-(x+5))$

Kuta Software - Infinite Algebra 2

Name_____

Operations with Complex Numbers

Date_____ Period____

Simplify.

1) $i + 6i$

2) $3 + 4 + 6i$

3) $3i + i$

4) $-8i - 7i$

5) $-1 - 8i - 4 - i$

6) $7 + i + 4 + 4$

7) $-3 + 6i - (-5 - 3i) - 8i$

8) $3 + 3i + 8 - 2i - 7$

9) $4i(-2 - 8i)$

10) $5i \cdot -i$

11) $5i \cdot i \cdot -2i$

12) $-4i \cdot 5i$

13) $(-2 - i)(4 + i)$

14) $(7 - 6i)(-8 + 3i)$

15) $7i \cdot 3i(-8 - 6i)$

16) $(4 - 5i)(4 + i)$

17) $(2-4i)(-6+4i)$

18) $(-3+2i)(-6-8i)$

19) $(8-6i)(-4-4i)$

20) $(1-7i)^2$

21) $6(-7+6i)(-4+2i)$

22) $(-2-2i)(-4-3i)(7+8i)$

23) $5i+7i\cdot i$

24) $(6i)^3$

25) $6i\cdot -4i+8$

26) $-6(4-6i)$

27) $(8-3i)^2$

28) $3+7i-3i-4$

29) $-3i\cdot 6i-3(-7+6i)$

30) $-6i(8-6i)(-8-8i)$

Critical thinking questions:

31) How are the following problems different?

Simplify: $(2+x)(3-2x)$
Simplify: $(2+i)(3-2i)$

32) How are the following problems different?

Simplify: $2+x-(3-2x)$
Simplify: $2+i-(3-2i)$

Kuta Software - Infinite Algebra 2

Name_____

Operations with Complex Numbers

Date_____ Period____

Simplify.

1) $i + 6i$

$7i$

2) $3 + 4 + 6i$

$7 + 6i$

3) $3i + i$

$4i$

4) $-8i - 7i$

$-15i$

5) $-1 - 8i - 4 - i$

$-5 - 9i$

6) $7 + i + 4 + 4$

$15 + i$

7) $-3 + 6i - (-5 - 3i) - 8i$

$2 + i$

8) $3 + 3i + 8 - 2i - 7$

$4 + i$

9) $4i(-2 - 8i)$

$32 - 8i$

10) $5i \cdot -i$

5

11) $5i \cdot i \cdot -2i$

$10i$

12) $-4i \cdot 5i$

20

13) $(-2 - i)(4 + i)$

$-7 - 6i$

14) $(7 - 6i)(-8 + 3i)$

$-38 + 69i$

15) $7i \cdot 3i(-8 - 6i)$

$168 + 126i$

16) $(4 - 5i)(4 + i)$

$21 - 16i$

17) $(2-4i)(-6+4i)$

$4+32i$

18) $(-3+2i)(-6-8i)$

$34+12i$

19) $(8-6i)(-4-4i)$

$-56-8i$

20) $(1-7i)^2$

$-48-14i$

21) $6(-7+6i)(-4+2i)$

$96-228i$

22) $(-2-2i)(-4-3i)(7+8i)$

$-98+114i$

23) $5i+7i\cdot i$

$-7+5i$

24) $(6i)^3$

$-216i$

25) $6i\cdot -4i+8$

32

26) $-6(4-6i)$

$-24+36i$

27) $(8-3i)^2$

$55-48i$

28) $3+7i-3i-4$

$-1+4i$

29) $-3i\cdot 6i-3(-7+6i)$

$39-18i$

30) $-6i(8-6i)(-8-8i)$

$-96+672i$

Critical thinking questions:

31) How are the following problems different?

Simplify: $(2+x)(3-2x)$
Simplify: $(2+i)(3-2i)$

$i^2=-1$ so it leads to a few more steps

32) How are the following problems different?

Simplify: $2+x-(3-2x)$
Simplify: $2+i-(3-2i)$

There is no difference.

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Name_____

Solving Rational Equations

Date_____ Period____

Solve each equation. Remember to check for extraneous solutions.

1) $\frac{1}{6k^2} = \frac{1}{3k^2} - \frac{1}{k}$

2) $\frac{1}{n^2} + \frac{1}{n} = \frac{1}{2n^2}$

3) $\frac{1}{6b^2} + \frac{1}{6b} = \frac{1}{b^2}$

4) $\frac{b+6}{4b^2} + \frac{3}{2b^2} = \frac{b+4}{2b^2}$

5) $\frac{1}{x} = \frac{6}{5x} + 1$

6) $\frac{1}{6x^2} = \frac{1}{2x} + \frac{7}{6x^2}$

7) $\frac{1}{v} + \frac{3v+12}{v^2-5v} = \frac{7v-56}{v^2-5v}$

8) $\frac{1}{m^2-m} + \frac{1}{m} = \frac{5}{m^2-m}$

9) $\frac{1}{n-8} - 1 = \frac{7}{n-8}$

10) $\frac{1}{r-2} + \frac{1}{r^2-7r+10} = \frac{6}{r-2}$

11) $1 = \frac{v+2}{v-4} + \frac{7v-42}{v-4}$

12) $\frac{r-4}{5r} = \frac{1}{5r} + 1$

13) $1 + \frac{x^2-5x-24}{3x} = \frac{x-6}{3x}$

14) $1 = \frac{1}{x^2+2x} + \frac{x-1}{x}$

15) $\frac{n+5}{n+8} = 1 + \frac{6}{n+1}$

16) $\frac{r+5}{r^2-2r} - 1 = \frac{1}{r^2-2r}$

17) $\frac{1}{x^2-5x} = \frac{x+7}{x} - 1$

18) $\frac{a-2}{a+3} - 1 = \frac{3}{a+2}$

19) $\frac{p+5}{p^2+p} = \frac{1}{p^2+p} - \frac{p-6}{p+1}$

20) $\frac{5}{n^3+5n^2} = \frac{4}{n+5} + \frac{1}{n^2}$

Kuta Software - Infinite Algebra 2

Name_____

Solving Rational Equations

Date_____ Period____

Solve each equation. Remember to check for extraneous solutions.

1) $\frac{1}{6k^2} = \frac{1}{3k^2} - \frac{1}{k}$

$\left\{\frac{1}{6}\right\}$

2) $\frac{1}{n^2} + \frac{1}{n} = \frac{1}{2n^2}$

$\left\{-\frac{1}{2}\right\}$

3) $\frac{1}{6b^2} + \frac{1}{6b} = \frac{1}{b^2}$

$\{5\}$

4) $\frac{b+6}{4b^2} + \frac{3}{2b^2} = \frac{b+4}{2b^2}$

$\{4\}$

5) $\frac{1}{x} = \frac{6}{5x} + 1$

$\left\{-\frac{1}{5}\right\}$

6) $\frac{1}{6x^2} = \frac{1}{2x} + \frac{7}{6x^2}$

$\{-2\}$

7) $\frac{1}{v} + \frac{3v+12}{v^2-5v} = \frac{7v-56}{v^2-5v}$

$\{21\}$

8) $\frac{1}{m^2-m} + \frac{1}{m} = \frac{5}{m^2-m}$

$\{5\}$

9) $\frac{1}{n-8} - 1 = \frac{7}{n-8}$

$\{2\}$

10) $\frac{1}{r-2} + \frac{1}{r^2-7r+10} = \frac{6}{r-2}$

$\left\{\frac{26}{5}\right\}$

11) $1 = \frac{v+2}{v-4} + \frac{7v-42}{v-4}$

$\left\{\frac{36}{7}\right\}$

12) $\frac{r-4}{5r} = \frac{1}{5r} + 1$

$\left\{-\frac{5}{4}\right\}$

13) $1 + \frac{x^2-5x-24}{3x} = \frac{x-6}{3x}$

$\{-3, 6\}$

14) $1 = \frac{1}{x^2+2x} + \frac{x-1}{x}$

$\{-1\}$

15) $\frac{n+5}{n+8} = 1 + \frac{6}{n+1}$

$\left\{-\frac{17}{3}\right\}$

16) $\frac{r+5}{r^2-2r} - 1 = \frac{1}{r^2-2r}$

$\{4, -1\}$

17) $\frac{1}{x^2-5x} = \frac{x+7}{x} - 1$

$\left\{\frac{36}{7}\right\}$

18) $\frac{a-2}{a+3} - 1 = \frac{3}{a+2}$

$\left\{-\frac{19}{8}\right\}$

19) $\frac{p+5}{p^2+p} = \frac{1}{p^2+p} - \frac{p-6}{p+1}$

$\{4, 1\}$

20) $\frac{5}{n^3+5n^2} = \frac{4}{n+5} + \frac{1}{n^2}$

$\left\{-\frac{1}{4}\right\}$

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Kuta Software - Infinite Algebra 1

Name_____

Radical Equations - Part 2

Date_____ Period____

Solve each equation. Remember to check for extraneous solutions.

1) $\sqrt{110 - n} = n$

2) $p = \sqrt{2 - p}$

3) $\sqrt{30 - x} = x$

4) $x = \sqrt{8x}$

5) $x = \sqrt{42 - x}$

6) $\sqrt{12 - r} = r$

7) $\sqrt{4n} = n$

8) $\sqrt{5v} = v$

9) $r = \sqrt{10r}$

10) $m = \sqrt{56 - m}$

11) $b = \sqrt{-4 + 4b}$

12) $r = \sqrt{8r}$

13) $\sqrt{-16 + 10a} = a$

14) $r = \sqrt{-1 - 2r}$

15) $\sqrt{-45+14n}=n$

16) $x=\sqrt{110-x}$

17) $\sqrt{9n}=n$

18) $x=\sqrt{40-3x}$

19) $\sqrt{90-n}=n$

20) $x=\sqrt{-70+17x}$

21) $\sqrt{4n+8}=n+3$

22) $-n+\sqrt{6n+19}=2$

23) $4+\sqrt{-3m+10}=m$

24) $x-5=\sqrt{x+1}$

25) $n-7=\sqrt{3n-21}$

26) $b-6=\sqrt{18-3b}$

27) $-3+\sqrt{m+59}=m$

28) $\sqrt{7a-54}-a=-6$

Kuta Software - Infinite Algebra 1

Name_____

Radical Equations - Part 2

Date_____ Period____

Solve each equation. Remember to check for extraneous solutions.

1) $\sqrt{110 - n} = n$

{10}

2) $p = \sqrt{2 - p}$

{1}

3) $\sqrt{30 - x} = x$

{5}

4) $x = \sqrt{8x}$

{0, 8}

5) $x = \sqrt{42 - x}$

{6}

6) $\sqrt{12 - r} = r$

{3}

7) $\sqrt{4n} = n$

{0, 4}

8) $\sqrt{5v} = v$

{0, 5}

9) $r = \sqrt{10r}$

{0, 10}

10) $m = \sqrt{56 - m}$

{7}

11) $b = \sqrt{-4 + 4b}$

{2}

12) $r = \sqrt{8r}$

{0, 8}

13) $\sqrt{-16 + 10a} = a$

{2, 8}

14) $r = \sqrt{-1 - 2r}$

No solution.

15) $\sqrt{-45+14n} = n$

{5, 9}

16) $x = \sqrt{110 - x}$

{10}

17) $\sqrt{9n} = n$

{0, 9}

18) $x = \sqrt{40 - 3x}$

{5}

19) $\sqrt{90 - n} = n$

{9}

20) $x = \sqrt{-70 + 17x}$

{7, 10}

21) $\sqrt{4n + 8} = n + 3$

{−1}

22) $-n + \sqrt{6n + 19} = 2$

{5}

23) $4 + \sqrt{-3m + 10} = m$

No solution.

24) $x - 5 = \sqrt{x + 1}$

{8}

25) $n - 7 = \sqrt{3n - 21}$

{10, 7}

26) $b - 6 = \sqrt{18 - 3b}$

{6}

27) $-3 + \sqrt{m + 59} = m$

{5}

28) $\sqrt{7a - 54} - a = -6$

{9, 10}

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