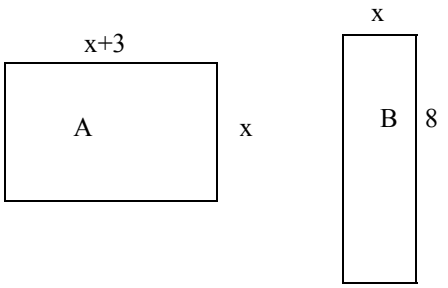
1 If the area of the 2 rectangles is the same, find the dimensions of each.



CODE:

ANSWER:

NMAθ Hustle 2002

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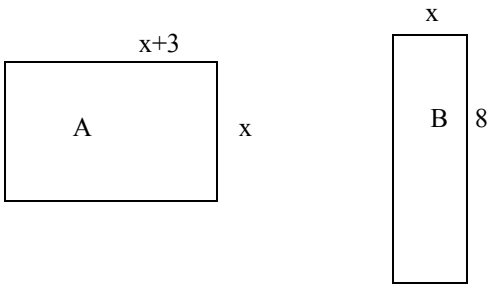

CODE:

ANSWER:

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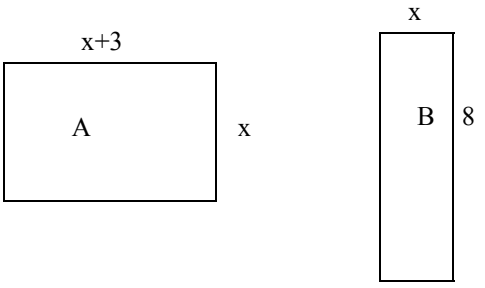

CODE:

ANSWER:

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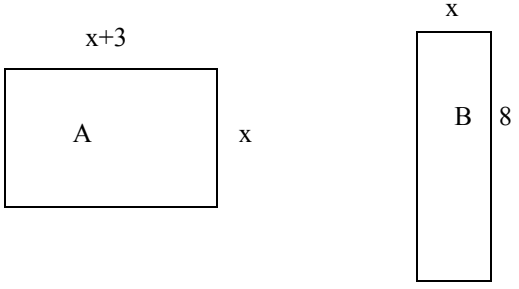

CODE:

ANSWER:

NMAθ Hustle 2002

2 If $f(x)=7x-26$, find $f\left(f^{-1}(4)\right)$.

CODE:

ANSWER:

NMAθ Hustle 2002

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CODE:

ANSWER:

NMAθ Hustle 2002

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3 Simplify with positive exponents only:

$$\left(\frac{y^{-1}-x^{-1}}{y^{-2}-x^{-2}}\right)\left(\frac{1}{x}\right)^{0}.$$

CODE:

ANSWER:

NMAθ Hustle 2002

3 Simplify with positive exponents only:

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CODE:

ANSWER:

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CODE:

ANSWER:

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CODE:

ANSWER:

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4 What is the minimum value that the expression $|x-4|-5$ can attain?

CODE:
ANSWER:

NMAθ Hustle 2002

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CODE:
ANSWER:

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CODE:
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CODE:
ANSWER:

NMAθ Hustle 2002

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5 Find the sum of the roots for $x(x+1)-5(x+1)=0$.

CODE:

ANSWER:

NMAθ Hustle 2002

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CODE:

ANSWER:

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ANSWER:

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CODE:

ANSWER:

NMAθ Hustle 2002

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6 Define $a \odot b = a^2 + b^2$, find $2.4 \odot 7.6$.

CODE:

ANSWER:

NMAθ Hustle 2002

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CODE:

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ANSWER:

NMAθ Hustle 2002

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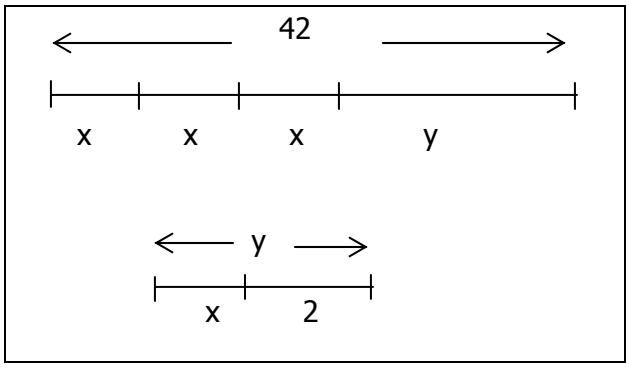
CODE:

ANSWER:

NMAθ Hustle 2002

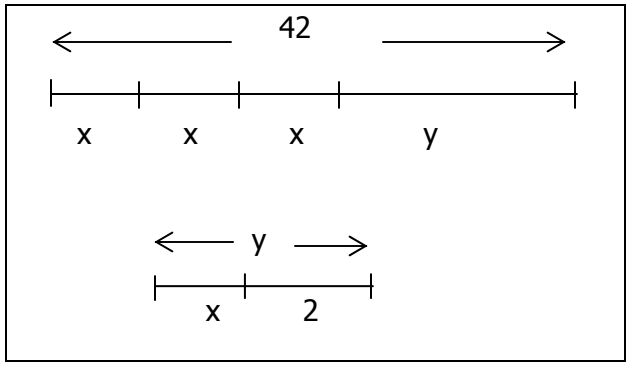
7 Use the diagrams to solve for *x*.



CODE:
ANSWER:

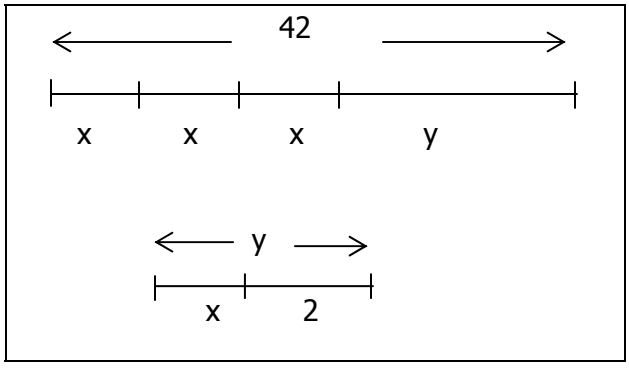
NMAθ Hustle 2002

7 Use the diagrams to solve for *x*.



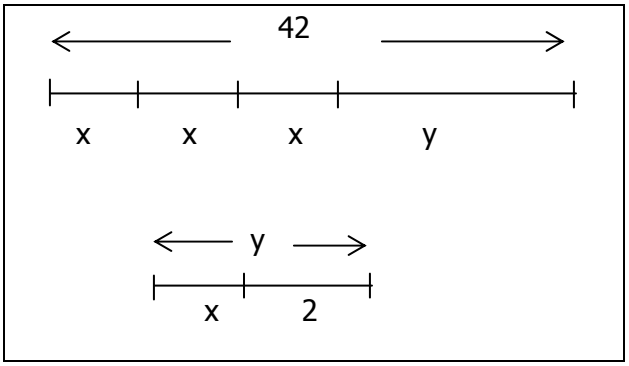
CODE:
ANSWER:

7 Use the diagrams to solve for *x*.



CODE:
ANSWER:

7 Use the diagrams to solve for *x*.



CODE:
ANSWER:

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8 Simplify and solve for x:
$5|x-5|+6|x-5|-3|x-5|=40$

CODE:
ANSWER:

NMAθ Hustle 2002

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CODE:
ANSWER:

NMAθ Hustle 2002

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$5|x-5|+6|x-5|-3|x-5|=40$

CODE:
ANSWER:

NMAθ Hustle 2002

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9 Solve for x:

$$\left(x^2-x\right)^2-26\left(x^2-x\right)+120=0$$

CODE:

ANSWER:

NMAθ Hustle 2002

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CODE:

ANSWER:

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ANSWER:

NMAθ Hustle 2002

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$$\left(x^2-x\right)^2-26\left(x^2-x\right)+120=0$$

CODE:

ANSWER:

NMAθ Hustle 2002

10 Simplify:

$16x-3[2x-(7-2x)-5(x+1)+7]$

CODE:

ANSWER:

NMAθ Hustle 2002

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CODE:

ANSWER:

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CODE:

ANSWER:

NMAθ Hustle 2002

11 Give the exact roots for x:
$2x^2 - 5x + 1 = 0$.

CODE:
ANSWER:

NMAθ Hustle 2002

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CODE:
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CODE:
ANSWER:

NMAθ Hustle 2002

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12 Multiply:
$(x+6y)(x^2-6xy+36y^2)$

CODE:
ANSWER:

NMAθ Hustle 2002

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CODE:
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CODE:
ANSWER:

NMAθ Hustle 2002

13 Two forestry stations are located at $F_1(-5,-2)$ and $F_2(9,5)$. Which station is closest to a fire located at $(-3,9)$?

CODE:
ANSWER:

NMAθ Hustle 2002

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NMAθ Hustle 2002

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CODE:
ANSWER:

14 The lines $\frac{4x-2y}{3}=3$ and $3x+y=2+kx$ are parallel. Find the value of *k*.

CODE:

ANSWER:

NMAθ Hustle 2002

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CODE:

ANSWER:

NMAθ Hustle 2002

NMAθ Hustle 2002

15 Simplify: $(12+i)^2-(i-12)^2$

CODE:

ANSWER:

NMAθ Hustle 2002

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CODE:

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NMAθ Hustle 2002

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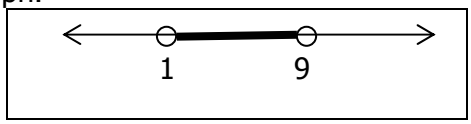
CODE:

ANSWER:

NMAθ Hustle 2002

16 Write an absolute value inequality for the graph.



CODE:
ANSWER:

NMAθ Hustle 2002

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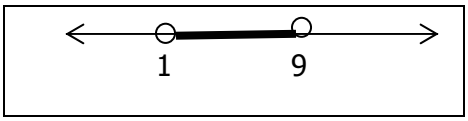

CODE:
ANSWER:

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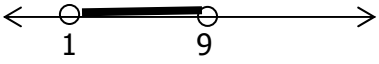

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ANSWER:

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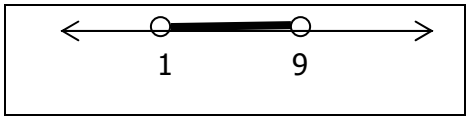

CODE:
ANSWER:

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NMAθ Hustle 2002

17 Simplify completely: $\frac{\left(6^{2x+y}\right)\left(6^{y}\right)}{6^{2y}}$

CODE:

ANSWER:

NMAθ Hustle 2002

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NMAθ Hustle 2002

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CODE:

ANSWER:

NMAθ Hustle 2002

NMAθ Hustle 2002

18 Which of the following has the smallest value?

$27^{-\frac{2}{3}}, 216^{\frac{2}{3}}, 16^{-\frac{5}{4}}, 64^{-\frac{1}{6}}$

CODE:

ANSWER:

NMAθ Hustle 2002

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CODE:

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CODE:

ANSWER:

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19 If $p^2+q^2=5$ and $pq=-2$, find the positive value of $p-q$.

CODE:
ANSWER:

NMAθ Hustle 2002

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CODE:
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CODE:
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CODE:
ANSWER:

NMAθ Hustle 2002

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20 Three sides of a triangle have sides $7x^2 + 6x - 10$, $15x^2 - 8x + 9$ and $4x^2 + 12x - 6$. Find the perimeter of the triangle.

CODE:
ANSWER:

NMAθ Hustle 2002

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CODE:
ANSWER:

NMAθ Hustle 2002

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21 Solve for x:
5 (3c - x) - (2c - x) = 7x + 2c.

CODE:
ANSWER:

NMAθ Hustle 2002

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CODE:
ANSWER:

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NMAθ Hustle 2002

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CODE:
ANSWER:

NMAθ Hustle 2002

22 Write an equation in standard form of the line that passes through the points (-6,6) and (9,1).

CODE:

ANSWER:

NMAθ Hustle 2002

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CODE:

ANSWER:

NMAθ Hustle 2002

23 The slope of the line perpendicular to the line represented by 6x - 14y = 28 is ?

CODE:
ANSWER:

NMAθ Hustle 2002

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CODE:
ANSWER:

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CODE:
ANSWER:

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CODE:
ANSWER:

NMAθ Hustle 2002

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24 Solve for x: 6 - (3 + x) < 8 - 2x

CODE:
ANSWER:

NMAθ Hustle 2002

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CODE:
ANSWER:

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CODE:
ANSWER:

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CODE:
ANSWER:

NMAθ Hustle 2002

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25 If $f(x) = -3x + 1$ and $g(x) = 2x^2$, find $(f \circ g)(x)$.

CODE:

ANSWER:

NMAθ Hustle 2002

25 If $f(x) = -3x + 1$ and $g(x) = 2x^2$, find $(f \circ g)(x)$.

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ANSWER:

NMAθ Hustle 2002

NMAθ Hustle 2002