

Start  
 $X \sim N(5, 9)$   
 $Y \sim N(3, 16)$   
 $W \sim N(4, 25)$

$X + X \sim ?$

$X + X + X \sim ?$	$N(15, 81)$	$3X \sim ?$	$N(10, 36)$	$2X \sim ?$	$N(10, 18)$
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$N(15, 27)$
$Y + Y \sim ?$

$N(6, 32)$	$2Y \sim ?$	$N(6, 64)$	$3Y \sim ?$	$N(9, 144)$	$2W \sim ?$
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$N(8, 100)$

$W + W \sim ?$

$X + Y \sim ?$	$N(-1, 34)$	$W - X \sim ?$	$N(9, 34)$	$W + X \sim ?$	$N(8, 50)$
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$N(8, 25)$
$X - Y \sim ?$

$W + X + Y \sim ?$	$N(1, 34)$	$X - W \sim ?$	$N(-2, 25)$	$Y - X \sim ?$	$N(2, 25)$
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$N(12, 50)$
$W - X + Y \sim ?$

$N(2, 50)$	$2X - W \sim ?$	$N(6, 61)$	$X - 2W \sim ?$	$N(-3, 109)$	$X + 2Y - W \sim ?$
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$N(7, 98)$
X is at least twice Y $\Rightarrow$

<i>End</i>	$X - 4Y < 0$	a quarter of X is less than Y $\Rightarrow$	$2X - Y > 0$	X is more than half of Y $\Rightarrow$	$X - 2Y > 0$
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