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TEST 6:

#15 440 yds in 80 sec.

$$\frac{440 \text{ yds}}{80 \text{ sec.}} \times \frac{3 \text{ ft.}}{1 \text{ yd}} \times \frac{1 \text{ mile}}{5280 \text{ ft.}} \times \frac{3 \text{ min}}{60 \text{ sec.}} \times \frac{1 \text{ hour}}{60 \text{ min.}} = \frac{45}{4}$$

$$= 11.25 \frac{\text{miles}}{\text{hour}}$$

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$$\frac{584,300,000 \text{ miles}}{1 \text{ year}} \times \frac{1 \text{ yr}}{365 \text{ days}} \times \frac{1 \text{ day}}{24 \text{ hours}} =$$

$$\approx 66,700 \text{ miles/hour}$$

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5' 5'1" = 61"

5'

1"

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MIDTERM Exam: WELCOME CENTER  
Chpts. 1-4 (Jim Pratt)

You may substitute this score for any exam  
1-4.

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7.5 Division with Negative Numbers

$8 \div 2 = +4$   
 $8 \div (-2) = -4$   
 $-8 \div (-2) = +4$   
 $-8 \div 2 = -4$

If the 2 numbers have the same signs, the quotient is Positive

If the 2 numbers have different signs, the quotient is Negative

$\frac{a}{b} \quad \frac{-a}{b}$

$\frac{-a}{-b} = \frac{a}{b} = -\frac{a}{-b}$

$\frac{-a}{b} = \frac{a}{-b} = -\frac{a}{b}$

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$$\frac{8(-5)}{-4} = \frac{-40}{-4} = 10$$

$$\frac{-20 + 6(-2)}{7-11} = \frac{-20 + (-12)}{7+(-11)} = \frac{-32}{-4} = +8$$

$$-3(4^2) + 10 \div (-5)$$

$$-3(16) + -2$$

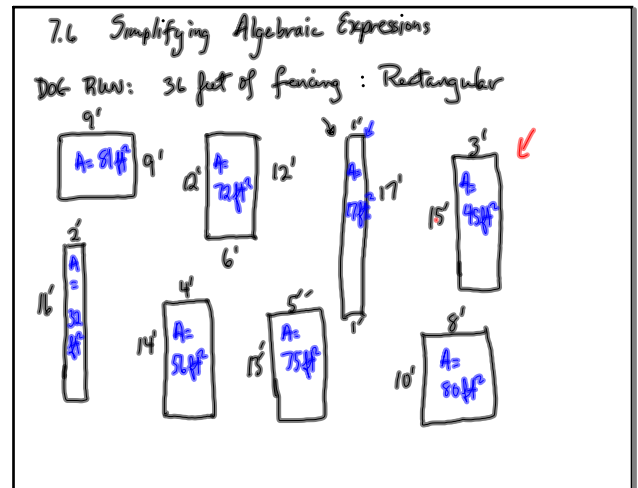
$$-48 + -2$$

$$-50$$

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$$\begin{aligned} -80 \div 2 &= 10 \\ -40 \div 10 & \\ -4 & \end{aligned}$$

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$$\begin{aligned} 5(7a) &= (5 \cdot 7)a = 35a \\ -3(9x) &= (-3 \cdot 9)x = -27x \\ 5(-8y) &= (5 \cdot (-8))y = -40y \\ 6 + (9+x) &= (6+9)+x = 15+x \\ (3x+7) + 4 &= 3x+(7+4) = 3x+11 \end{aligned}$$

*7y => implies multiplication*

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Distributive Property:  $4(3+7) = 4(10) = 40$   
 $\rightarrow 4(3) + 4(7) = 12+28=40$

$$\begin{aligned} 6(x+4) \\ 6x + 6(4) \\ 6x + 24 \end{aligned}$$

$$\begin{aligned} 7(a-5) &= 7a - 7(5) = 7a - 35 \\ \left( \begin{array}{l} 7a + 7(-5) \\ 7a + (-35) \\ 7a - 35 \end{array} \right) \end{aligned}$$

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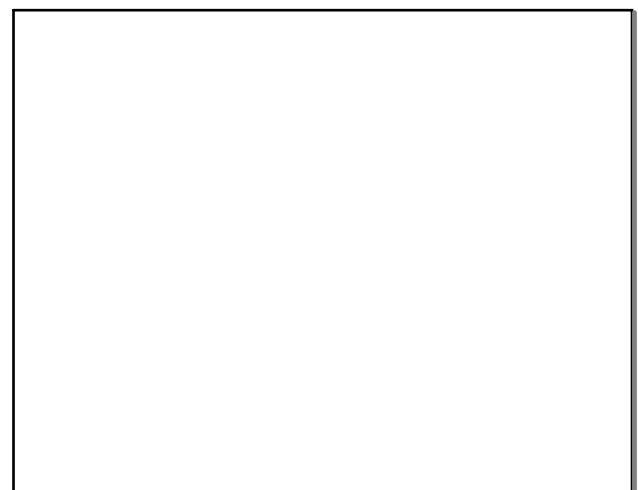
$$\begin{aligned} 6(4x-5) & & 3(8a-4) \\ 6(4x) - 6(5) & & 3(8a) - 3(4) \\ (6 \cdot 4)x - 6(5) & & 24a - 12 \\ 24x - 30 & & \end{aligned}$$
  

$$\begin{aligned} 8(3x+4y) \\ 8(3x) + 8(4y) \\ 24x + 32y \\ 24(2) + 32(1) \\ 48 + 32 \\ 80 \end{aligned}$$

*x=2, y=1*

~~$$\begin{aligned} (24+32)(xy) \\ 56xy \\ 56(2)(1) \\ 112 \end{aligned}$$~~

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Similar Terms (Variable part is the same)

1)  $3x + 4x$       $x(3+4)$       $\begin{matrix} (1) x \\ (2) a \\ (3) y \end{matrix}$   
 $7x$       $\frac{x(7)}{7x}$

2)  $7a + a$      3)  $-5x + 7x$       $(-5)(7x) = -35x$   
 $7a + 1a$       $2x$

4)  $8y - y$      5)  $-4a + 2a$      6)  $-4a - 2a$   
 $8y - 1y$       $-2a$       $-4a + (-2a)$   
 $7y$       $-6a$

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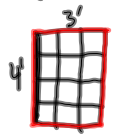
1)  $3x - 7x$       $x=2$   
 $3x + (-7x)$   
 $-4x$

2)  $5x + 2x^2$       $x=-2$   
 $5x + 2x^2$   
 ~~$5(-2) + 2(-2)^2 - 7(-2)$   
 $-10 + 2(4) = -14$   
 $-10 + 8$   
 $-2 \neq -14$   
 can't combine variables with different powers~~

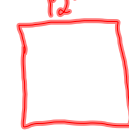
$3(2) - 7(2)$   
 $6 - 14$   
 $6 + (-14) = -8$   
 $-4(2) = -8$


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Area and Perimeter

  $L \times W = A$   
 $4 \times 3 = A$   
 $12 \text{ ft}^2 = A$

$P = 14'$

  $12'$   
 $A = 144 \text{ ft}^2$   
 $P = 48 \text{ ft.}$

  $100 \text{ yds}$       $53 \text{ yds}$   
 $A = 53 \cdot 100$   
 $= 5300 \text{ yds}^2$   
 $P = 100 + 100 + 53 + 53$   
 $= 306 \text{ yds}$

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 for online classes

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