Take your quiz score, divide it by 35.
Multiply the result by 15
Add to Test 1 score

$$|2x-1| < 5$$
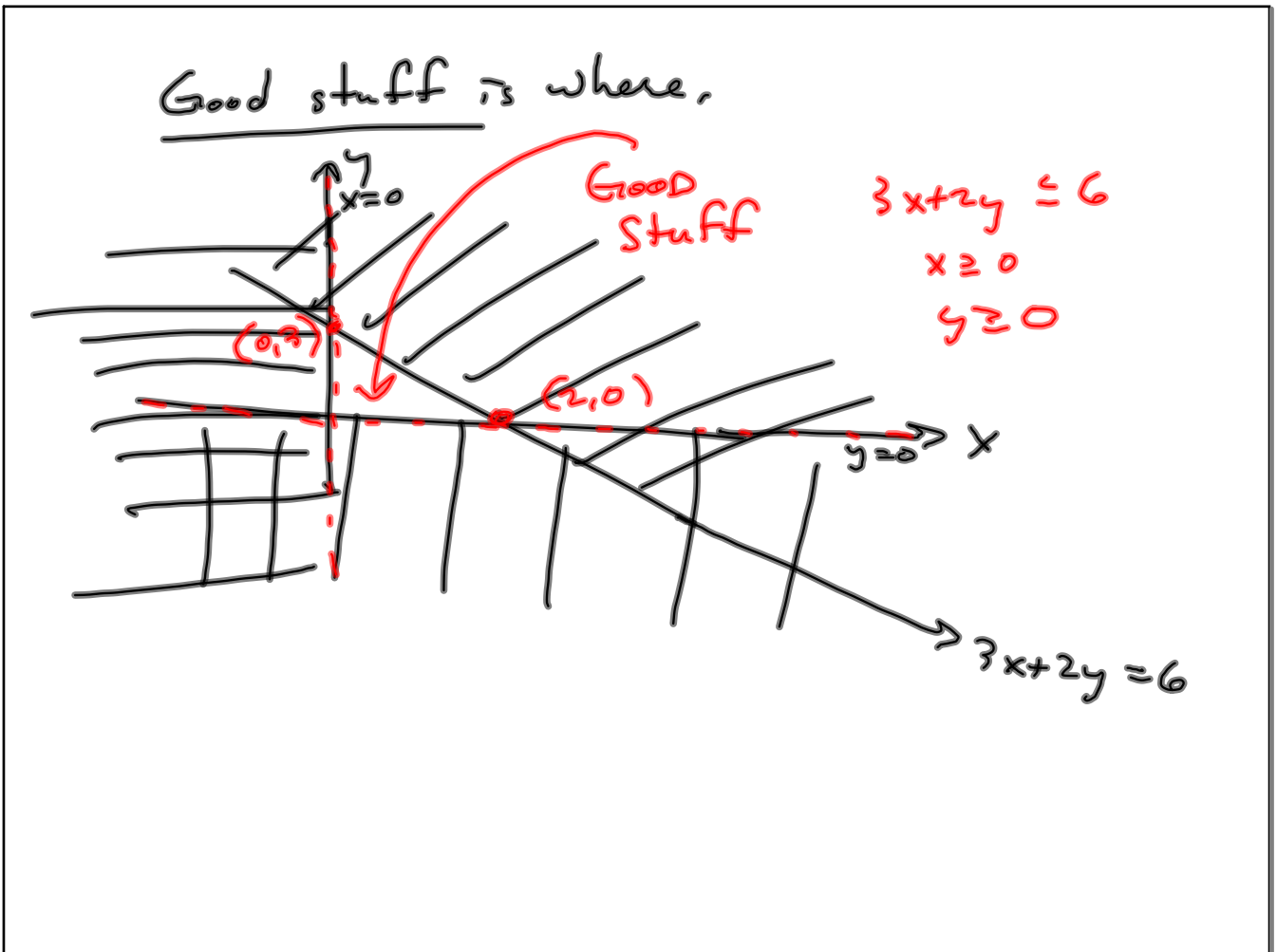
$$2x-1 < 5 \quad \text{AND} \quad 2x-1 > -5$$

$$\vdots$$

$$|2x-1| > 5$$

$$2x-1 > 5 \quad \text{OR} \quad 2x-1 < -5$$

$$\vdots$$

Good stuff is where.



Good Stuff

$3x+2y \leq 6$
$x \geq 0$
$y \geq 0$

(0,3)

(2,0)

$y=0$   X

$x=0$

$3x+2y = 6$

§ 4.3 Solns posted

§ 5.1, 5.2

§ 1.3 Prerequisite Skills
     Objectives 3 & 4
Should be SOLID on ALL § 1.3

$$3^4 = \underbrace{3 \cdot 3 \cdot 3 \cdot 3}_{4 \text{ of 'em}}$$

$$3^4 \cdot 3^2 = \underbrace{(\underbrace{3 \cdot 3 \cdot 3 \cdot 3}_{4})(\underbrace{3 \cdot 3}_{2})}_{4+2} = 3^{4+2} = 3^6$$

$$x^n = \underbrace{x \cdot x \cdot \cdots x}_{n \text{ of 'em}}$$

$$x^n \cdot x^m = x^{n+m}$$

$$(x^n)^m = x^{n \cdot m}$$

$$(x^n)^m = \underbrace{(\underbrace{x \cdots x}_{n})(\underbrace{x \cdots x}_{n}) \cdots (\underbrace{x \cdots x}_{n})}_{m}$$

$$= x^{\overbrace{n+n+n+\cdots+n}^{m}} = x^{mn}$$

$$(3^2)^4 = 3^{2 \cdot 4} = 3^8$$

$$\frac{x^m}{x^n} = x^{m-n}$$

$$\frac{3^4}{3^2} = \frac{3 \cdot 3 \cdot 3 \cdot 3}{3 \cdot 3} = 3^2 = 3^{4-2}$$

$$x^{-m} = \frac{1}{x^m}$$

$$\frac{1}{x^{-m}} = x^m$$

$$x^1 \cdot x^7 \cdot x^6 = x^{1+7+6} = x^{14}$$

$$ab = ba$$

$$(-4x^3 p^2)(4y^3 x^3)$$
$$= (-4)(4) \, x^3 x^3 \, p^2 y^3$$
$$= -16 \, x^6 p^2 y^3$$

$$\frac{x^9 y^6}{x^8 y^6} = x^{9-8} y^{6-6} = x^1 y^0 = x$$

$$\frac{x^2}{x^5} = x^{2-5} = x^{-3} = \frac{1}{x^3}$$

$$\frac{P^{-13}}{P^{-3}} = P^{-13-(-3)} = P^{-13+3} = P^{-10} = \frac{1}{P^{10}}$$

$$1 + 5 \cdot x = 6x$$

$$(5x)^0 + 5 \cdot x^0 =$$

$$1 + 5 = 6$$

$$1^{-3} - 4^{-2}$$

$$\frac{1}{1^3} - \frac{1}{4^2}$$

$$\frac{1}{1} - \frac{1}{16}$$

$$\frac{1}{1} \cdot \frac{16}{16} - \frac{1}{16} = \frac{16-1}{16} = \frac{15}{16}$$

$$\frac{x^{-5}y^7}{x^{-2}y^{-3}} = x^{-5+2}\,y^{7+3} = x^{-3}y^{10} = \frac{y^{10}}{x^3}$$

$$3.000 = 3.000 \times 10^3$$

$$3287 = 3.287 \times 10^3$$

$$.0000000009257$$

$$= 9.257 \times 10^{-10}$$

$$\left(5 \times 10^{11}\right)\left(2.9 \times 10^{-3}\right)$$

$$14.5 \times 10^{11-3}$$

$$1.45 \times 10^1 \times 10^8$$

$$= 1.45 \times 10^9$$

$$\frac{.00048}{.0016} = \frac{4.8 \times 10^{-4}}{1.6 \times 10^{-3}} = \frac{4.8}{1.6} \times 10^{-4+3}$$

$$= 3 \times 10^{-1}$$

$$(xy)^2 = x^2 y^2$$

$$(x+y)^2 = x^2 + y^2$$

**Nooo!**
**Powers don't distribute over sums.**

$$\sqrt{x} \quad \text{means} \quad x^{\frac{1}{2}}$$

$$(x+y)^{\frac{1}{2}} = ?$$

**Nooo!**

$$\sqrt{9+16} = \sqrt{9} + \sqrt{16}$$

is saying that $(9+16)^{\frac{1}{2}} = 9^{\frac{1}{2}} + 16^{\frac{1}{2}}$

$$\sqrt{25} = 5$$

$$\sqrt{9} + \sqrt{16} = 3 + 4 = 7$$

$$\left(-xy^0x^2a^3\right)^{-3}$$

$$(-1)^{-3} = \frac{1}{(-1)^3} = \frac{1}{-1} = -1$$

$$=\left(-1\,x^3a^3\right)^{-3}$$

$$(-1)(-1)(-1) = -1$$

$$=(-1)^{-3}\left(x^3\right)^{-3}\left(a^3\right)^{-3}$$

$$= -1\,x^{-9}a^{-9} = -\frac{1}{x^9a^9}$$

$$\frac{16x^{-5-3a}\,y^{-2a-b}}{2x^{-5+3b}\,y^{2b-a}} =$$

$$\frac{16}{2}\,x^{-5-3a-(-5+3b)}\,y^{-2a-b-(2b-a)}$$

$$= 8x^{-5-3a+5-3b}\,y^{-2a-b-2b+a}$$

Assume $a, b > 0$

$$= 8x^{-3a-3b}\,y^{-a-3b}$$

$$= 8x^{-(3a+3b)}\,y^{-(a+3b)}$$

$$= \frac{8}{x^{3a+3b}\,y^{a+3b}}$$

Oct 4-11:50 AM

Quiz Tomorrow from §5.1, 5.2
Open Notes / Homework.
work as many odds as you need
to be able to do these.

Oct 4-11:56 AM