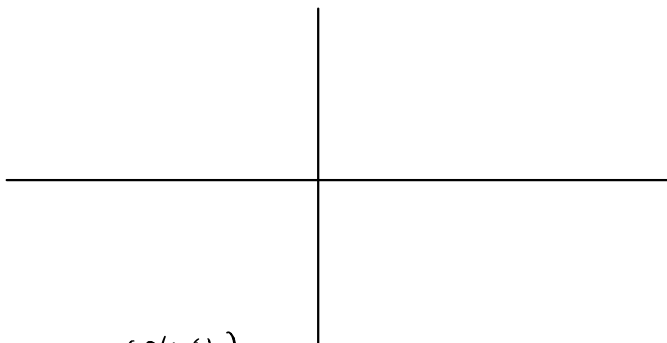


2-6-22 741t English + 741t Math

42) J



43)

$$i^0 = 1$$

$$i^1 = i$$

$$i^2 = -1$$

$$i^{(0 \text{ or } 2)} = i^2$$

You could think or really hard  
or just **plug in**

54)

$$\log_{10}(a) = b$$

$$10^b = a$$

$$a > 0$$

Domain of  $\log$  is

$$x > 0$$

$$a = x^2 - 4x + 3 > 0$$

$$(x-3)(x-1) > 0$$

$$4^2 - 4(4) + 3$$

$$16 - 16 + 3 > 0$$

K

$$(-1)^2 - 4(-1) + 3$$

$$1 + 4 + 3 > 0$$

55)

main  
diag

off diag

$$\det \begin{vmatrix} a & b \\ c & d \end{vmatrix}$$

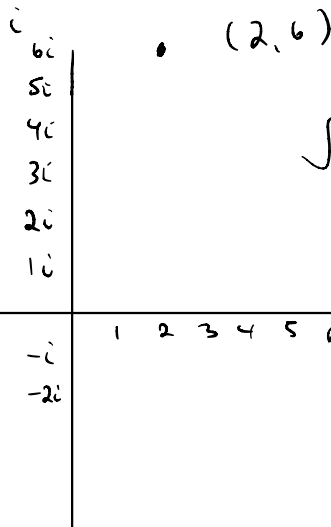
$$= ad - bc$$

$$\begin{pmatrix} 8 & 3 \\ -5 & -2 \end{pmatrix}$$

$$= -16 - (-10) = -6$$

57)

$(-4, 3)$



$$\sqrt{(2 - (-4))^2 + (6 - 3)^2}$$

60)

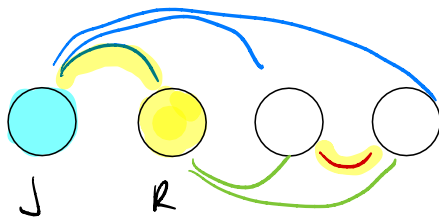
$$2\pi$$

$$C = 2\pi r = 2\pi(1)$$

$$(\pi - 4\pi)^2$$

58)

Math 2018 December BOS



6 pairs you can choose

$$\frac{2 \text{ lines}}{6 \text{ total}}$$

$$nC_r = \binom{n}{r} = \frac{n!}{r!(n-r)!}$$

$$= \binom{n}{n-r} \quad nPr = \frac{n!}{(n-r)!}$$



$$\binom{5}{3} = \binom{5}{2}$$

$$\binom{5}{4} = \binom{5}{1}$$

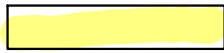
5 math

3 sci-h

2 workbooks

1 environment

1 miscellaneas



How many arrangements?

$$(5! \cdot 3! \cdot 2! \cdot 1! \cdot 1!) \cdot 5!$$

order small groups

order large groups

$$nC_r = \binom{n}{r} = \frac{n!}{r!(n-r)!}$$

$$= \binom{n}{n-r} \quad nPr = \frac{n!}{(n-r)!}$$

$r=5$



$r!$



59)

$$c^2 = a^2 + b^2 - 2ab \cos C$$

$$x^2 = 10^2 + 14^2 - 2(10)(14)\cos ?$$

$$10^2 \dots \dots \dots \cos(34^\circ)$$

A

$$(x-4)^2 + (y-3)^2 = 2^2$$

$$\frac{(x-4)^2}{2^2} + \frac{(y-3)^2}{2^2} = 1$$

