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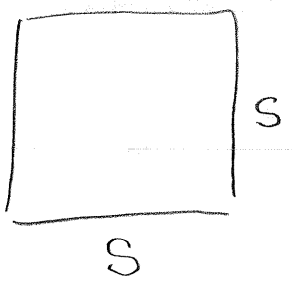
12/6/2012 - Final Review Day 2

#34



$P = 4s$

According to Problem

$P = 8s - 12$

$4s = 8s - 12$

$-8s \quad -8s$

$\frac{-4s}{-4} = \frac{-12}{-4}$

$s = 3$

$8 \cdot 3$

$24 - 12 = 12$.

$P = 4 \cdot 3 = 12$ ✓

↖ B

#39

$(5+6i)(4+8i)$

$5 \cdot 4 + 40i +$

$20 + 40i + 24i + 48i^2$

$20 + 64i + 48i^2(-1)$

$20 + 64i - 48$

$-28 + 64i$ ← C

#36 $(2-3\sqrt{2})^2$

$(2-3\sqrt{2})(2-3\sqrt{2})$

$4 - 2\cdot 3\sqrt{2} - 2\cdot 3\sqrt{2} + 3\sqrt{2}\cdot 3\sqrt{2}$

$(2\cdot 3)\cdot\sqrt{2}$ $\qquad 3\cdot\sqrt{2}\cdot 3\cdot\sqrt{2}$

$4 - 6\sqrt{2} - 6\sqrt{2} + 3\cdot 3\cdot\sqrt{2}\cdot\sqrt{2}$

$\sqrt{4} = 2$

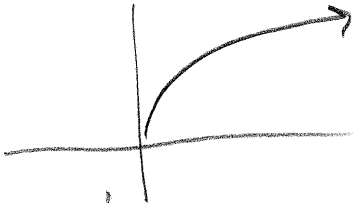
$4 - 6\sqrt{2} - 6\sqrt{2} + 9\cdot 2$

$4 - 6\sqrt{2} - 6\sqrt{2} + 18$

$22 - 12\sqrt{2}$ ← C

#38 is a function, Give the domain

$y = \sqrt{2x-7}$



← basic shape from parent function $\sqrt{x}$

Vertical Line test passed

yes function

B

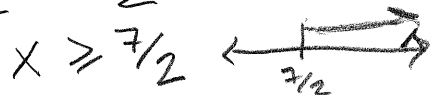
Domain: $[7/2, \infty)$

$2x - 7 \geq 0$

$+7 \quad +7$

$\frac{2x}{2} \geq \frac{7}{2}$

$x \geq 7/2$



#42 find slope perpendicular to $-3x + 4y = -23$

through $(-3, 8)$

$y - y_1 = m(x - x_1)$

$y - 8 = -4/3(x - -3)$

$+3x \quad +3x$

$\frac{4y}{4} = \frac{3x}{4} - \frac{23}{4}$

$y = \frac{3}{4}x - \frac{23}{4}$

$m = 3/4$

my slope $= -4/3$

~~$y = -4/3 x + 8$~~ ↑ Not the y-int

#40 $\frac{y^2 + 2y - 24}{y^2 - 2y - 48}$ ← E ← R

$\frac{(y+6)(y-4)}{(y-8)(y+6)} = \boxed{\frac{y-4}{y-8}}$ ← D

#37 $x^2 + 36$

Prime

~~difference of Squares~~

~~difference of cubes~~

~~Sum of cubes~~

#43 $x + 3y = 23$

$5x + 2y = -2$

Substitution

Top Eq, Solve for x

$x + 3y = 23$

$-3y \quad -3y$

$x = -3y + 23$

bottom Eq, Substitute

$5(-3y+23) + 2y = -2$

$-15y + 115 + 2y = -2$

$-13y + 115 = -2$

$-115 \quad -115$

$\frac{-13y}{-13} = \frac{-117}{-13}$

$y = 9$

$x = -3y + 23$

$x = -3(9) + 23$

$= -27 + 23$

$= -4$

$(-4, 9) \leftarrow B$

Elimination

Eliminate x ← Randy picked

$-5(x + 3y = 23)$ ↓ -5 Eq1

$-5x - 15y = -115$

$5x + 2y = -2$ ↓ add together

$\frac{-13y}{-13} = \frac{-117}{-13}$

$y = 9$

$x + 3(9) = 23$

$x + 27 = 23$

$-27 \quad -27$

$x = -4$

$(-4, 9)$

#49 $\dfrac{(6+2i)(9+3i)}{(9-3i)(9+3i)}$ ← Richfield ← Ephraim

$$\frac{48+36i}{90} = \frac{48}{90} + \frac{36}{90}i$$

$$= \frac{8}{15} + \frac{2}{5}i$$

↑ A