

KEY

Name: _____

Period: _____

Write the answers to the problems in one of the boxes below. Use the three graphs boxes for the problems that require graphing.

① $x:JP$ $y:TJ$
 $x = y + 5$
 $x + y = 41$

③ $n + d = 53 \rightarrow n = 53 - d$
 $.05n + .10d = 4.40$
 $.05(53 - d) + .10d = 4.40$
 $2.65 - .05d + .10d = 4.40$
 $2.65 + .05d = 4.40$
 $.05d = 1.75$
 $d = 35$
 $n = 18$

④ Break Even
 $I = E$
 $18t = 250 + 8t$
 $10t = 250$
 $t = 25 + \text{shirts}$

⑤ Algebra tile

x	x ²	xy
x	x ²	xy
-1	-x	-x

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

⑥ Simplify $(x - 5)^2$
 $(x - 5)(x - 5)$

x	-5
x	x ² - 5x
-5	-5x + 25

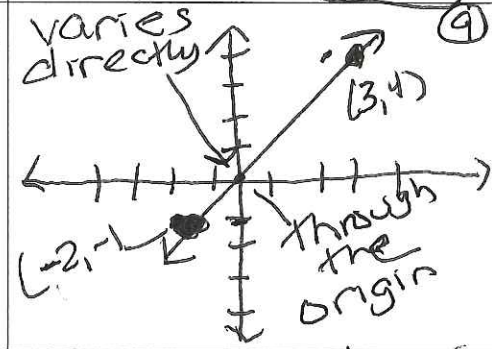
 $x^2 - 10x + 25$

⑦ Simplify: $3\left(\sqrt{\frac{3^{12}}{3^3}}\right)^2$
 $159,049$

⑧

8	$-\sqrt{7}$
48	$-6\sqrt{7}$
$8\sqrt{7}$	-7

 $4 + 2\sqrt{7}$



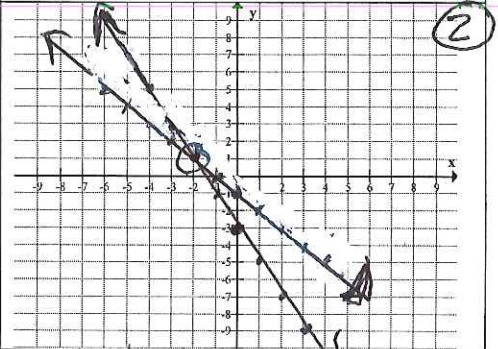
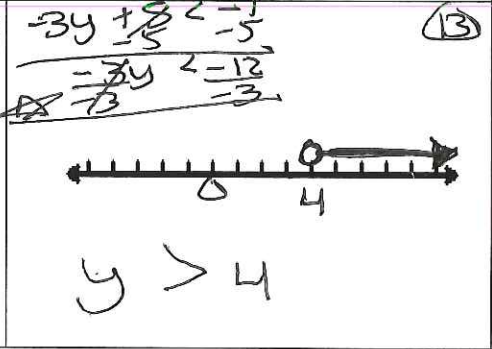
⑩ $A = P(1 + rt)^t$
 $P = 300$
 $r = 4\% = .04$
 $t = 150$
 $1950 - 1800$
 Equat: $A = 300(1 + .04)^{150}$
 Balance: \$107,676.80

⑪ 3 solutions of $y \leq -3x + 3$
 on calc. values (pts)
 below this line in shaded area or on the line
 $(0, 0)$, $(-1, -2)$
 $(-5, 2)$, $(2, -5)$ etc...

⑫ Inverse Variation
 $yx = yx$
 $54(4) = y(3)$
 $216 = \frac{3}{3}y$
 $y = 72 \text{ mph}$

⑬ $4\sqrt{12} + \sqrt{3}$
 $8\sqrt{3} + \sqrt{3} = 9\sqrt{3}$

⑭ $\frac{4}{\sqrt{7}} \left(\frac{\sqrt{7}}{\sqrt{7}}\right)$
 $\frac{4\sqrt{7}}{7}$



Solution $(-2, 1)$