

**SOLUTIONS:**

1. If you draw 4 apples you will be sure that you will get 2 apples of one kind.

2. registered:  $0.8 \times 150 = 120$  people

150 - 120 = 30 not registered

3.  $3/5$ , 0.6, 60%

4. a)  $-112/5$  b)  $-262/5$  c) -106

5. a) 5.56 b) 6467.63 c) 13.098

6. a)  $x^{10}$  b)  $x^{-4}y^6 = \frac{y^6}{x^4}$  c)  $x^{-10}y^4 = \frac{y^4}{x^{10}}$

7. One US dollar is smaller.

=  $0.9x$

8. 20.4, 122.4

9. 8.15 hrs, 13.85 mi/hr

10. L=18 in. W=4 in.

11.  $2/3 \times 3/4 = 1/2$

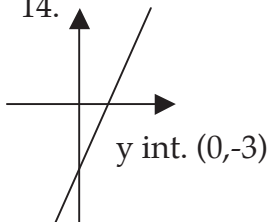
12. a)  $-7/2$  b) 6,-6 c) 4, -3

d) -2 e) 7, -13

13. a)  $x = \frac{5+2y}{3}$ ,  $y = \frac{5-3x}{-2} = \frac{3x-5}{2}$

b)  $x = 7 - y$ ,  $y = 7 - x$

14.



15. (B,T,C) : (0,2,3), (0,6,0), (1,0,4),  
(1,4,1), (2,2,2), (3,0,3), (3,4,0), (9,0,0),...

22. a) need to factor out 3 first before simplifying;  
need to divide both sides by 3 (not subtract 3)

b) do not add -3 to both sides;  
can not subtract 2 (need to divide by 2) both sides;  
divide by -4 (not subtract) both sides

c)  $5(x^2y^3) = 5x^2y^3$

16.  $P = 120 + 12\pi \approx 157.7$  ft

$A = 1,152 + 72\pi \approx 1,378.2$  ft<sup>2</sup>

17.  $7/27 = 25.93\%$

18. \$ 5,961.78

19. 2 years ago: salary =  $x$

Last year :  $x - 0.1x$

This year:  $0.9x$

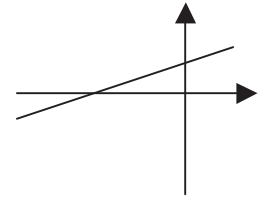
Next year:  $0.9x + 0.1(0.9x) =$   
 $= 0.99x$

Answer: NO

20. x-int:  $(-15/2, 0)$

y-int:  $(0, 15/7)$

slope =  $2/7$



21. a) 3,-3 b) 1.63 c) 35.2

d) 12,549,704.2

23. a) 2.5 b) 0.102

24. -1.058