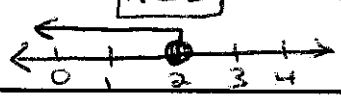
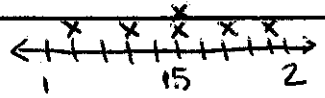
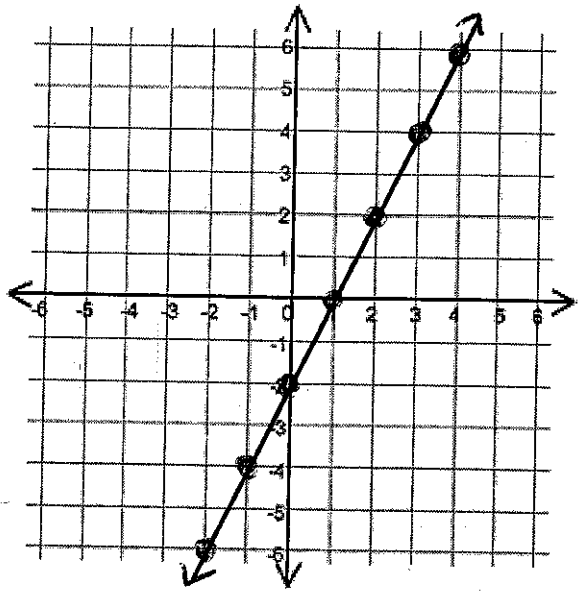
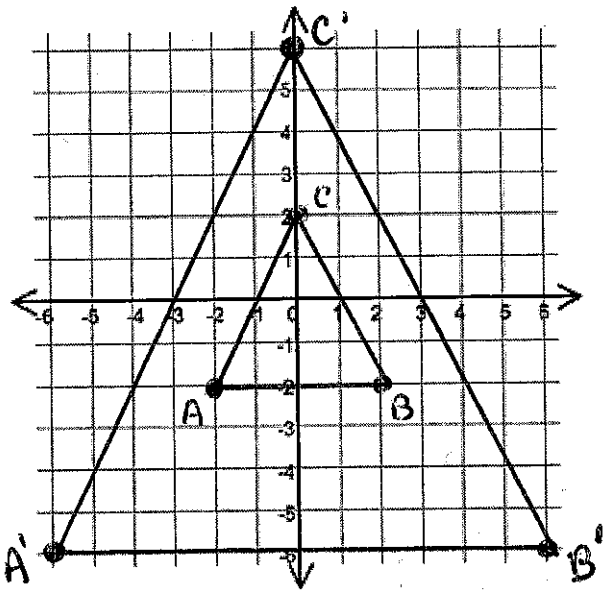
Homework Answer Key **Course 3 Lesson # 71**

1. 12 pens	2. 93 students	3. $1300
4. • Yes. • Constant of variation is 3. • equilateral triangle	5. $x = \frac{21}{5} = 4.2$ $y = \frac{25}{7} \approx 3.57$	6. No, although it is linear, the graph does not include the origin. (graph on back)
7. $114 cm^2$	8. a. 1.06 b. $1\frac{3}{50}$ c. $1.06 \times 21 = \$22.26$	9. $\frac{2}{3}$
10. 21%	11. $7 - x \geq 5$ $x \leq 2$ 	12. 37°
13. a.  b. mean, median, mode all equal 1.5 range: 0.8 c. range	14. $\frac{100 m}{50 sec}\left(\frac{60 sec}{1 min}\right) = 120$ meters per min	15. (see graph on back) A'(−6,−6) B'(6,−6) C'(0,6)
16. $33\frac{1}{3}\%$	17. $\frac{3x}{y^2}$	18. 0
19. 17	20. 4.8	21. $x = -1$
22. $x = 20$	23. $x = 70$	24. $x = 16$
25. D.	26.	27.
28.	29.	30.

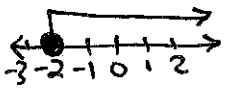
#6 $y = 2x - 2$



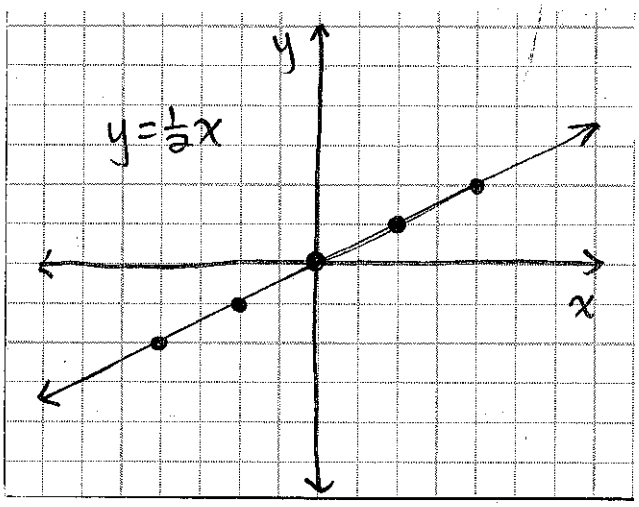
#15



Homework Answer Key **Course 3 Lesson # 72**

1. 20 fish	**2.** ✡ 150 pigeons	**3.** 320 pages
✡ **4.** No, the ratio of $\frac{y}{x}$ is not constant.	**5.** ✡ $a = 14$ $b = 4$ $\frac{1}{2}$	**6.** 616 yd/min.
✡ **7.** ✡ $\frac{1}{2}$ yd./sec	**8.** Yes, the graph is a straight line and includes (0,0) [see graph on back]	**9.** $99.25 in^2$
10. a. $0.\overline{3}$ b. $\frac{1}{3}$ c. $33\frac{1}{3}\%$ or $33.\overline{3}\%$	**11.** $x = 95°$ $y = 85°$ $z = 85°$	**12.** a. {HHH, HHT, HTT, HTH, TTT, TTH, THH, THT} b. $\frac{1}{2}$ c. increase
13. $6.88	**14.** 250,000 miles	**15.** a. $7(x^2+5x-2)$ b. $-3(x+5)$
16. $\frac{4a}{3b^3}$	**17.** $\frac{1}{4}$	**18.** $y+1$
19. 2.132	**20.** $t = -4$	**21.** $x = 2$
22. $x = 4$	**23.** $x = 7$	**24.** $x \geq -2$ 
25. 265 consumers	**26.**	**27.**
28.	**29.**	**30.**

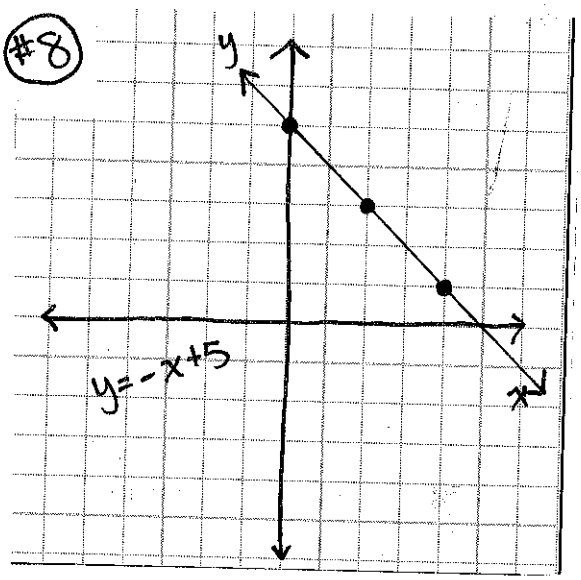
#8



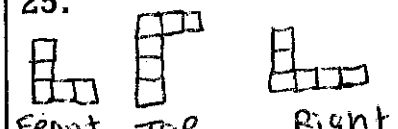
Homework Answer Key **Course 3 Lesson # 73**

1. 44%	**2.** 125 students	**3.** $14.40
4. yes; 5	**5.** 8in.	**6.** *use unit multiplier! 6 ft/sec
7. 5mph	**8.** (see graph on back)	**9.** $60m^2$
10. a. $0.08\overline{3}$ b. $8\frac{1}{3}\%$ or $8.\overline{3}\%$ c. B. less than one inten pay cash	**11.** a. $4(x^2+3x-1)$ b. $-2(x+8)$	**12.** P = 26 in. $A = 32\ in^2$
13. P = 36in $A = 30cm^2$	**14.** D. 6 and 7 in.	**15.** B. $c = 0.85p + 4$
16. $\frac{4m^7}{3b^4}$	**17.** -8	**18.** X = 1
19. $X = \frac{1}{2}$	**20.** $X = 4\frac{1}{2}$	**21.** X = 16
22. X = 20	**23.** X = 8	**24.** 37
25. Shows that it costs $5 to get in the park and $1 per ride. Not proportional. Get rid of the entrance fee to make it proportional.	**26.**	**27.**
28.	**29.**	**30.**

#8

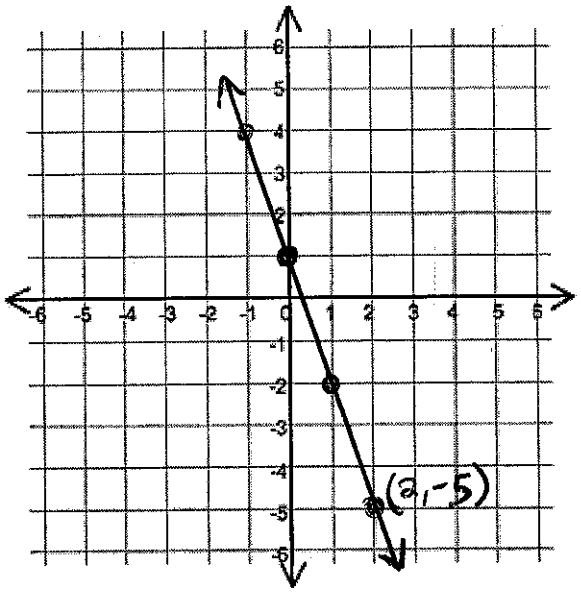


Homework Answer Key **Course 3 Lesson # 74**

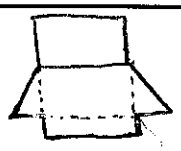
1. 18 basketballs	★ 2. 5%	★ 3. $72
★ 4. yes. 3.1	5. $a = 8$, $b = 15$	6. $\frac{2}{3}$; $\frac{4}{9}$
7. 50	★ 8. $3\sqrt{2}$	★ 9. $5\sqrt{3}$
10. $\frac{3x}{2y^3}$ ★	11. $86400 in^3 \left(\frac{1ft}{12in}\right)\left(\frac{1ft}{12in}\right)\left(\frac{1ft}{12in}\right) = 50 ft^3$	12. yes. (see graph on back)
13. 156	14. a. $0.2\overline{6}$ b. $26\frac{2}{3}\%$ or $26.\overline{6}\%$ c. $26\frac{2}{3}\%$ of the athletes had previously played in the finals.	15. a. $6(x^2-5x-3)$ b. $2x(x^2+1)$
16. B.	★ 17. 96%	18. $\frac{70cm}{240 cm^2}$
★ 19. a. $156 m^2$ b. rhombus	★ 20. $x = \frac{-13}{16}$	★ 21. $x = 6\frac{2}{3}$
22. $m = -6$	23. $x = -10$	24. $x = 4$
25. 	26.	27.
28.	29.	30.

#12

$y = -3x + 1$



Homework Answer Key **Course 3 Lesson # 75**

1. 800 doctors	2. 30%	3. 40 tuba players
★ 4. $a = 15$, $b = 30$	★ 5. trapezoid $160 m^2$	★ 6. parallelogram $77 in^2$
7. C	8. $x = -23$	9. $x = 2$
10. $r = 44$	11. $x = 3$	12. $x = 8$
★ 13. $x = 8$	★ 14. $3\sqrt{5}$	★ 15. $5\sqrt{2}$
16. a. $72\frac{8}{11}\%$ (or $72.\overline{72}\%$) b. $0.\overline{72}$ c. 0.727	17. 300%	18. $\frac{7}{10}$ or 0.7 or 70%
19. $\frac{15 mi}{1 hr.}\left(\frac{5280 ft.}{1 mi}\right)\left(\frac{1 hr.}{60 min}\right)\left(\frac{1 min}{60 sec}\right) =$ 22 ft/sec	20. yes. (see graph on back)	21. a. $a = 4$, $b = 4.5$ b. corresponding angles are equal c. isosceles d. 1.5
22. $2 ft \times 1 ft \times 0.75 ft.$ $1.5 ft^3$; $8.5 ft^2$	23. 57	24. 
25. Not direct variation because it doesn't include the origin.	26.	27.
28.	29.	30.

#20

$y = \frac{2}{3}x - 3$