GEO210, 230, 250 – Summer Review

1. Do exercises #1-50 posted below. You can check your answers in the answer key which is also below.
2. In the textbook do the following exercises:
   p. 243, Classroom Exercises #1-4, 8-16
   p. 246, Classroom Exercises #1-12. You should read p. 245 before working these exercises.

Geometry 210, 230, 250 Name_____ ID: 1

Summer Review

Date_____ Period____

Solve each equation.

1) $5x - 33 = -4(1 - 2x) - 8$

2) $4x + 30 = 4(5x - 5) + 2$

3) $3b + 39 = 7(7b - 8) + 3$

4) $-26 - 5a = -6(a + 3)$

Solve each equation by factoring.

5) $a^2 = 12 - 4a$

6) $p^2 = 18 + 3p$

7) $n^2 + 16 = 10n$

8) $x^2 + 2x = -1$

9) $x^2 = -20 - 9x$

10) $p^2 - 2p = 15$

11) $175b^2 = 60b + 160$

12) $14k = -3k^2 - 15$

Solve each proportion.

13) $\frac{12}{a + 4} = \frac{3}{a + 7}$

14) $\frac{12}{11} = \frac{r + 1}{r - 10}$

15) $\frac{4}{4x} = \frac{3}{5}$

16) $\frac{3}{7k - 5} = \frac{5}{3k - 12}$

Simplify.

17) $\sqrt{12}$

18) $\sqrt{45}$

19) $\sqrt{48}$

20) $10\sqrt{490}$

21) $3\sqrt{147}$

22) $-\sqrt{98}$

23) $6\sqrt{72}$

24) $-6\sqrt{64}$

25) $\sqrt{10} \cdot \sqrt{10}$

26) $\sqrt{2} \cdot \sqrt{3}$

27) $\sqrt{2} \cdot \sqrt{8}$

28) $2\sqrt{10}\left(\sqrt{2} + 5\right)$

29) $\sqrt{2}\left(-4\sqrt{2} + 3\right)$

30) $-2\sqrt{35} \cdot -6\sqrt{5}$

31) $-5\sqrt{6} \cdot -2\sqrt{15}$

32) $-6\sqrt{3} \cdot 6\sqrt{42}$

33) $-\sqrt{24} \cdot 4\sqrt{12}$

34) $7\sqrt{42} \cdot 7\sqrt{30}$

35) $\dfrac{\sqrt{5}}{\sqrt{2}}$

36) $\dfrac{\sqrt{2}}{4\sqrt{5}}$

37) $\dfrac{3\sqrt{3}}{\sqrt{2}}$

38) $\dfrac{\sqrt{8}}{5\sqrt{12}}$

39) $-2\sqrt{18} + 3\sqrt{2} + 3\sqrt{2}$

40) $3\sqrt{24} + 3\sqrt{6} - 2\sqrt{8}$

Solve each system.

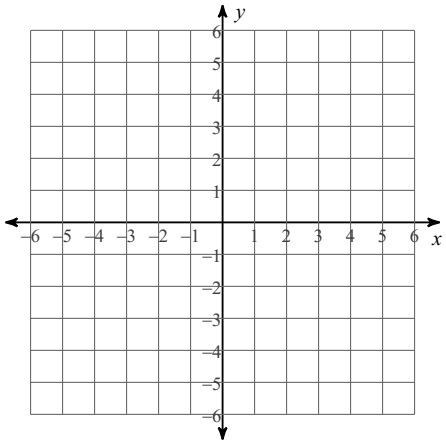
41) $-4x - 2y = 7$
$8x + 4y = -8$

42) $-3x + 8y = -4$
$-6x + 2y = 20$

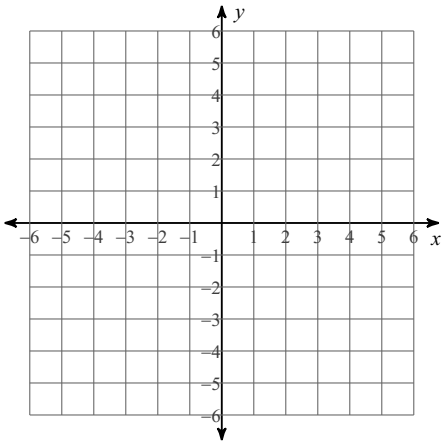
43) $-x - 6y = -4$
$4x + 12y = 16$

Sketch the graph of each line.

44) $2x - y = 5$

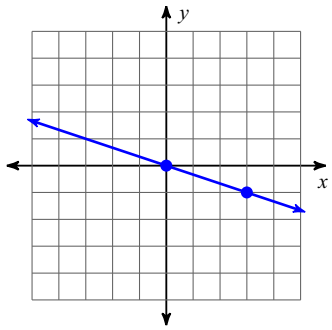


45) $y = -\frac{1}{2}x - 2$



Find the slope of each line.

46)



Find the slope of the line through each pair of points.

47) $(12, 19), (14, -18)$

48) $(-7, -17), (19, -15)$

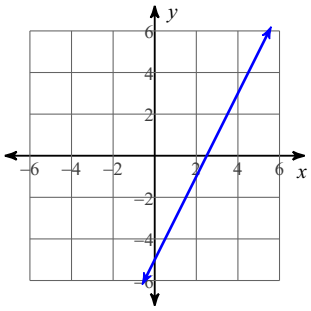
Find the slope of each line.

49) $4x + 5y = -25$

50) $16x = 10y - 50$

Answers to Summer Review (ID: 1)

1) $\{-7\}$
2) $\{3\}$
3) $\{2\}$
4) $\{8\}$
5) $\{2, -6\}$
6) $\{-3, 6\}$
7) $\{2, 8\}$
8) $\{-1\}$
9) $\{-5, -4\}$
10) $\{5, -3\}$
11) $\left\{\frac{8}{7}, -\frac{4}{5}\right\}$
12) $\left\{-\frac{5}{3}, -3\right\}$
13) $\{-8\}$
14) $\{131\}$
15) $\left\{\frac{5}{3}\right\}$
16) $\left\{-\frac{11}{26}\right\}$
17) $2\sqrt{3}$
18) $3\sqrt{5}$
19) $4\sqrt{3}$
20) $70\sqrt{10}$
21) $21\sqrt{3}$
22) $-7\sqrt{2}$
23) $36\sqrt{2}$
24) -48
25) 10
26) $\sqrt{6}$
27) 4
28) $4\sqrt{5} + 10\sqrt{10}$
29) $-8 + 3\sqrt{2}$
30) $60\sqrt{7}$
31) $30\sqrt{10}$
32) $-108\sqrt{14}$
33) $-48\sqrt{2}$
34) $294\sqrt{35}$
35) $\frac{\sqrt{10}}{2}$
36) $\frac{\sqrt{10}}{20}$
37) $\frac{3\sqrt{6}}{2}$
38) $\frac{\sqrt{6}}{15}$
39) 0
40) $9\sqrt{6} - 4\sqrt{2}$
41) No solution
42) $(-4, -2)$
43) $(4, 0)$
44)



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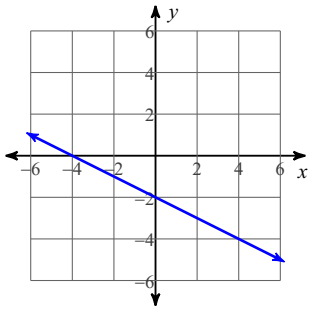

46) $-\frac{1}{3}$
47) $-\frac{37}{2}$
48) $\frac{1}{13}$
49) $-\frac{4}{5}$
50) $\frac{8}{5}$