

COMPASS Review

- $3 + \frac{1}{10} + \frac{7}{40} =$
- $\frac{2}{7} - \frac{11}{14} + 2 =$
- $\frac{3}{5}$ of what amount is 150?
- $\frac{1}{2}$ of $\frac{2}{3}$ of 360 is what?
- What is the difference between $\frac{4}{5}$ of 30 and $\frac{5}{9}$ of 20?
- What is $4 \div 15$?
- What is $\frac{1}{3}$ of 1.2% of \$1,000?
- y varies with x as 3 to 5. What is y when $x = 7$?
- Write .000314 in scientific notation.
- Write 31,400,00 in scientific notation.
- How far can you travel in 1 hour 24 minutes at 55 mph?
- On a trip of 200 miles you travel for 80 minutes at 45 mph. How many hours and minutes would it take to complete the trip at 50 mph?
- A drink is made from 80% water and 20% juice mix. If you start with 20 gallons of water, how much juice mix should be added?
- For the same drink mix, how much water should you use to prepare 6 gallons of drink?
- Solve: $3^x = 81$

16. Solve: $5^x = 125$

17. For $2^x = 50$, x is between what whole numbers?

18. Simplify: $\sqrt{72}$

19. Simplify: $\sqrt[3]{40}$

20. Simplify: $\sqrt[3]{16x^5y^6z^2}$

21. $2\sqrt{3} + \sqrt{27} - (\sqrt{6} + \sqrt{18}) =$

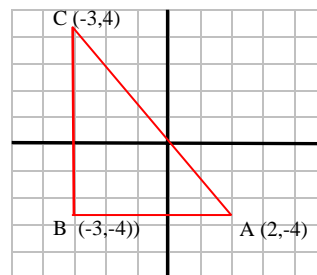
22. $(2 + \sqrt{3})(3 - \sqrt{3}) =$

23. $(1 - 2\sqrt{5})(2 - \sqrt{5}) =$

24. Rationalize the denominator:

$$\frac{2 + \sqrt{3}}{1 - \sqrt{2}}$$

25. Find the distances \overline{AB} , \overline{BC} , and \overline{AC} .



26. Where do the lines $y = 2x - 3$ and $y = x$ intersect?

27. Factor: $4x^2y^3 - 2xy^5 + 6x^3y^2$

28. Factor: $8x^6 - 18x^4$

29. Factor: $x^2 + 2x - 3$

30. Graph: $y = -2x + 1$

31. Graph: $2x - 3y = 9$

32. Simplify: $\frac{2x^4 + 8x^2}{2x^3 - 10x^2 + 9x}$

41. $(1-2i)(2-3i)$

33. Simplify: $\frac{6x^3 - 3x^2 - 18x}{6x^3 + 15x^2 + 9x}$

42. Rationalize the denominator:
 $\frac{2+2i}{3-2i}$

34. $4^{5/2} =$

43. $f(x) = x^2 + 2x - 3$ $f(2) =$

35. $9^{-3/2} =$

44. $f(2x) =$

36. $8^{2/3} =$

45. $f(x) = x^2 - kx$, $f(3) = 15$. $f(4) =$

37. $f(x) = x^2 + 2x - 3$ and $g(x) = x - 2$

46. $\log_2 8 =$

38. $g(f(-1)) =$

47. $\log_5 25 =$

39. $2\sqrt{-8} + \sqrt{-2} =$

48. $\log 10,000 =$

40. $\sqrt{-16x^4} - 3x\sqrt{-4x^2}$

1. $131/40$

2. $3/2$

3. 250

4. 120

5. $12 \frac{8}{9}$

6. .2666...

7. \$4

8. $y = 35/3$

9. 3.14×10^{-4}

10. 3.14×10^7

11. 77 miles

12. 2hrs. 48 min.

13. 5 gallons

14. 4.8 gallons

15. $x = 4$

16. $x = 3$

17. $5 < x < 6$

18. $6\sqrt{2}$

19. $2\sqrt[3]{5}$

20. $2xy^2 \sqrt[3]{2x^2z^2}$

21. $5\sqrt{3} - \sqrt{6} - 3\sqrt{2}$

22. $12 - 5\sqrt{5}$

23. $12 - 5\sqrt{5}$

24. $-2 - 2\sqrt{2} - \sqrt{3} - \sqrt{6}$

25. $\overline{AB} = 5, \overline{BC} = 8, \overline{AC} = \sqrt{89}$

26. (3,3)

27. $2xy^2(2xy - y^3 + 3x^2)$

28. $2x^4(2x-3)(2x+3)$

29. $(x-1)(x+3)$

30. (see graph)

31. (see graph)

32. $\frac{x(x^2+4)}{(x-2)(x-3)}$

33. $\frac{x-2}{x+1}$

34. 32

35. $1/27$

36. 4

37. 4

38. $x^2 - 2x - 3$

39. -6

40. $5i\sqrt{2}$

41. $-2x^2i$

42. $-4 - 7i$

43. $\frac{2}{13} + \frac{10}{13}i$

44.5

45. $4x^2 + 4x - 3$

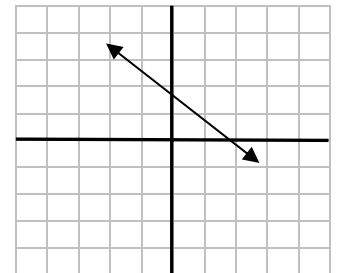
46. 24

47. 3

48. 2

49. 4

30.



31.

