

1. Add or Subtract:

(a) $-27 + (-13)$

(g) $-7 - (-9)$

(b) $-3.2 + 4.3$

(h) $-10 - (-3) - (-8) - 2$

(c) $-15 + 7 + (-5)$

(i) $-\frac{3}{8} - \frac{1}{24}$

(d) $-\frac{4}{9} + \frac{1}{9}$

(j) $-\frac{5}{6} - \left(-\frac{1}{9}\right)$

(e) $-\frac{3}{4} + \frac{1}{3}$

(k) $-4.8 + 3.61$

(f) $-12 - 23$

(l) $-2.3 - (-9.6)$

2. Multiply or Divide:

(a) $3(-8)$

(f) $(-56) \div 7$

(b) $(-7)(-2)$

(g) $(-36) \div (-4)$

(c) $(-2)(5)(-3)(-1)$

(h) $\left(\frac{1}{3}\right) \div \left(-\frac{4}{9}\right)$

(d) $\left(-\frac{2}{3}\right)\left(-\frac{6}{7}\right)$

(i) $6.6 \div (-2.2)$

(e) $(0.5)(-1.23)$

(j) $(1.76)(3.2)$

3. Evaluate:

(a) $|-12|$

(c) $|-2.3|$

(b) $-|7|$

(d) $\left|\frac{3}{4}\right|$

4. Write decimal notation for:

(a) $\frac{3}{8}$

(b) $\frac{-2}{5}$

(c) $\frac{9}{40}$

Express in simplest form:

(d) $\frac{30}{42}$

(e) $\frac{15}{25}$

(f) $\frac{16}{64}$

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5. Place the correct symbol, $<$ or $>$, between the numbers:

(a) $|-3|$ _____ 0 .

(b) -5 _____ $|-8|$

6. Evaluate:

(a) $12 - 2(5 - 9)$

(c) $-2^2 + 12 \div 3 - (-5)$

(b) $3(4 - 16) - (-2)^2$

(d) $-5 + 7 - 2 - (-4) + (-3)$

7. Evaluate:

(a) $ab - b^2$ for $a = -2$ and $b = 5$

(b) $3x^2 - 5xy + 2y$ for $x = -1$ and $y = 2$

8. Solve and check:

(a) $y - 2 = 3$

(f) $9x + 1 = 3x - 4$

(b) $x + 3 = -4$

(g) $7y - 6 = 10y - 15$

(c) $-5x = 15$

(h) $2x - 3(x - 5) = 18$

(d) $5y + 6 = 31$

(i) $10 - 7x = 4(2x + 10)$

(e) $-4x + 15 = -1$

(j) $5(t + 3) + 9 = 3(t - 2) + 6$

9. Clear fractions to solve and check:

(a) $\frac{x+5}{2} = \frac{x+11}{5}$

(b) $\frac{y-4}{9} + \frac{1}{3} = \frac{2}{3}$

(c) $\frac{4}{5}z + \frac{1}{4} = \frac{13}{20}$

10. Solve the literal equations:

(a) Solve for b : $ab + c = d$

(b) Solve for B : $A = \frac{B}{C}$

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11. Solve and graph on a number line:

(a) $x + 9 \geq 6$

(b) $7x > -14$

(c) $-6y < 42$

(d) $6x + 22 > 9x - 23$

(e) $4y - 6 \geq 3y - 1$

(f) $2x - 9 < 7x + 1$

(g) $5(2x + 7) > -4x - 7$

(h) $2(2x + 1) \geq 11x - 5$

12. Translate to an algebraic expression:

(a) 5 more than A

(b) the product of -16 and some number

(c) the quotient of 2 and w

(d) 23 less than twice a number

(e) M is subtracted from 12

(f) 3 more than three times a number

13. Translate to an equation and solve:

(a) Seven times what number is 84?

(b) When 35 is added to some number, the result is 98.

(c) Fourteen is seven less than three times a number.

(d) Eight less than twice a number is thirteen more than five times the number.

(e) In a college program, there are 57 more students registered for Math than English. There are a total of 129 students in the program. How many students are registered for each subject?

14. Perimeter Problems:

(a) The perimeter of a rectangle is 70ft. The length is 5ft more than the twice the width. Find the length and width of the rectangle.

(b) The perimeter of a rectangle is 54ft. The length is 3ft more than the width. Find the length and width of the rectangle.

(c) The perimeter of a rectangle is 60ft. The length is 10ft more than three times the width. Find the length and width of the rectangle.

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15. Convert to a decimal:
- (a) 6.17%
 - (b) 0.3%
 - (c) 12.7%
 - (d) 150%

- Convert to a percent:
- (e) 0.0045
 - (f) 0.17
 - (g) 1.4
-

16. Write an equation and solve:
- (a) What is 30% of 140?
 - (b) Find 35% of 180.
 - (c) What percent of 75 is 45?
 - (d) Find 7.5% of 72.
 - (e) 1230 is 60% of what number?
 - (f) 46 is what percent of 115?
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17. Percent word problems:
- (a) Mindy correctly answered 32 of the 40 questions on an exam. What percent of the questions were answered correctly?
 - (b) Frances left a 20% tip on a meal. If the meal cost \$22.65, what was the total he paid for the meal?
 - (c) An item that costs \$850 is on sale for 8% off. What is the sale price?
 - (d) A 9% sales tax applies to a computer that costs \$1200. What is the total purchase price of the computer?
 - (e) In 2012 there were 140 students enrolled in math classes. In 2013 the number of students enrolled in the classes increased by 15%. How many students enrolled in the math classes in 2013?
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18. Ratios and proportions:
- (a) If 8 gallons of gas costs \$56, how much do 12 gallons of gas cost?
 - (b) If 5 gallons of gas costs \$22.50, how much do 11 gallons of gas cost?
 - (c) If John can run 42 miles in six hours, at the same rate how long will it take him to run 84 miles?

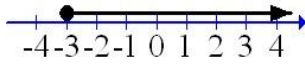
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Answer Key

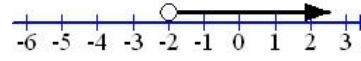
1a. -40	1b. 1.1	1c. -13	1d. $-\frac{1}{3}$	1e. $-\frac{5}{12}$	1f. -35	1g. 2	1h. -1	1i. $-\frac{5}{12}$	1j. $-\frac{13}{18}$
1k. -1.19	1l. 7.3								
2a. -24	2b. 14	2c. -30	2d. $\frac{4}{7}$	2e. -0.615	2f. -8	2g. 9	2h. $-\frac{3}{4}$	2i. -3	2j. 5.632
3a. 12	3b. -7	3c. 2.3	3d. $\frac{3}{4}$						
4a. 0.375	4b. -0.4	4c. 0.225	4d. $\frac{5}{7}$	4e. $\frac{3}{5}$	4f. $\frac{1}{4}$				
5a. >	5b. <								
6a. 20	6b. -40	6c. 5	6d. 1						
7a. -35	7b. 17								
8a. y=5	8b. x=-7	8c. x=-3	8d. y=5	8e. x=4	8f. x = $-\frac{5}{6}$	8g. y=3	8h. x=-3	8i. x=-2	8j. t = -12
9a. x = -1	9b. y = 7	9c. z = $\frac{1}{2}$							
10a. $b = \frac{d-c}{a}$	10b. B = AC								
11a. x ≥ -3	11b. x > -2	11c. y > -7	11d. x < 15	11e. y ≥ 5	11f. x > -2	11g. x > -3	11h. x ≤ 1		
12a. 5+A or A+5	12b. -16n	12c. $\frac{2}{w}$	12d. 2n-23	12e. 12-M	12f. 3+3n or 3n + 3				
13a. 12	13b. 63	13c. 7	13d. -7	13e. Engl.: 36 Math: 93					
14a. L=25 W=10	14b. L=15 W=12	14c. L=25 W=5							
15a. 0.0617	15b. 0.003	15c. 0.127	15d. 1.5	15e. 0.45%	15f. 17%	15g. 140%			
16a. 42	16b. 63	16c. 60%	16d. 5.4	16e. 2050	16f. 40%				
17a. 80%	17b. \$27.18	17c. \$782	17d. \$1308	17e. 161					
18a. \$84	18b. \$49.50	18c. 12							

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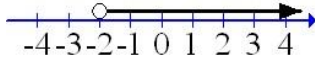
11a.



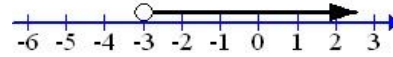
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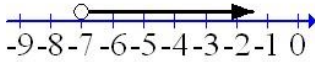
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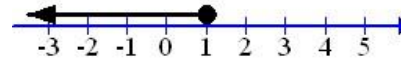
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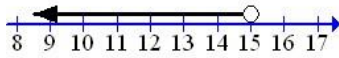
11c.



11h.



11d.



11e.

