

Section 1.1 – Expressions and Symbols

Problem Set 1

Convert each of the following English expressions to a mathematical expression and simplify it.

1. the product of eight and ten
2. five more than eighteen
3. five increased by twenty
4. the difference of eighteen and twelve
5. twenty-seven more than three hundred forty-eight
6. five less than twenty-one
7. six more than eight plus five
8. the quotient of sixteen and twenty-two
9. seven more than the difference of eight and one
10. six more than the product of twelve and one
11. the quotient of sixteen and four
12. four plus the product of eight and zero
13. five more than the quotient of twenty-five and five
14. the product of six and itself plus three

Convert each of the following scenarios into a mathematical expression and simplify it to answer the question.

15. Jonathan saves \$115 a month for a year. How much money has he saved?
16. Linda has saved \$1,501. If she spends \$250 on a new dishwasher and \$35 having it installed, how much does she have left?
17. Andrew has 120 songs on his iPod; Janet has 341 songs. If Luis has twice as much as Andrew and Janet together, how many songs does he have?
18. The circumference of the Earth at the equator is approximately 24,901 miles. If you go half way around the equator, how far have you traveled?
19. The population of New York is approximately 8,391,881. If the population of Los Angeles is approximately 3,831,868, how many more people live in New York?

Convert each mathematical expression to an English expression

20. $7 + 23$
21. $5 + 9$
22. $101 + 4$
23. $98 - 15$
24. $37 \cdot (1/3)$
25. $18 + 7 / 8$
26. $16 + 2 - 4$
27. $5 \cdot 13 / 4$
28. $2 - 4 / 13$

Put the appropriate symbol, = or \neq , in the blank.

29. $6 \cdot 5$ ____ 25
30. $20 \cdot 7$ ____ 15
31. $6 + 5$ ____ 21
32. $118 + 115$ ____ 223
33. $16 \cdot 13$ ____ 157
34. $16 / 9$ ____ 4

Simplify the following expressions.

35. $5(6 - 3)$
36. $(5 + 8) - 4$
37. $(5 + 2) / 14$
38. $4 + 3(5 - 1)$
39. $7 [2 (1 + 12) - 1]$
40. $6(3 + 1) - 4$
41. $\frac{8+8}{8-4}$
42. $\frac{5(25-5)}{10}$
43. $6(3 + 1) - 2(1 + 3)$