#2. Amber and Beryl together planted 15 trees. If Amber planted $m$ trees, how many trees did Beryl plant?

$15 - m$

#4. Meg bicycled 15 miles farther than Kwan. If Kwan rode $m$ miles, how far did Meg ride?

$m + 15$

Analysis:

Meg $10 + 15$ 35 + 15  m + 15
Kwan 10 35 m

#6. The sale price of a sweater is $15 less than the regular price. If the regular price is $m$ dollars, what is the sale price?

$m - 15$

#10. Rosalind is baby-sitting for $p$ children. If she brings 12 puzzles, how many will each child get? \( \frac{12}{p} \)

#16. Marc’s business will use $c$ padded mailing envelopes this month. If there are 36 envelopes in a package, how many packages should he order? \( \frac{c}{36} \)

#18. Takiji is 36 years older than Seiki. If Takiji is $c$ years old, how old is Seiki?

Seiki’s age is $c = 36$.

#20. If $c$ roommates share the $36$ electricity bill, how much should each pay? \( \frac{36}{c} \)

Page 37.

#22. 8 more than the number of students.

$s$: the number of students

$8 + s = s + 8$

#24. 10 times the height of the triangle.

$10 \cdot h = 10h = h \cdot 10$

$h$: the height of the triangle.

#26. $3 \frac{1}{4}$ inches taller than last year’s height.

$H$: last year’s height.

$3 \frac{1}{4} + H$ (inches)

#28. $30$ more than a bus ticket.

$30 + T$

$T$: a bus ticket.

#30. The quotient of the volume of the sphere and 8.

$V$: the volume of the sphere.

The quotient of $V$ and 8. \( \frac{V}{8} \)

Page 42.  

$I = p \cdot r \cdot t$

$p$: principle.
$r$: annual interest rate.
$t$: number of years.

#6. a. Suppose your Credit Union loans you $3000 to be repaid with 4% annual interest when you finish school. Write an expression for the amount of interest you will owe.
$t$: number of years that you are in school.

Interest = $3000 \cdot 4\% \cdot t$

b. How much interest will you owe if you finish school in 2 years? in 4 years? in 7 years?

$t = 2.$

Interest = $3000 \cdot 4\% \cdot 2$

\[= 3000 \cdot \frac{4}{100} \cdot 2 = 30 \cdot \frac{4}{1} \cdot 2 = 240\]

$t = 4.$

Interest = $3000 \cdot 4\% \cdot 4$

\[= 3000 \cdot \frac{4}{100} \cdot 4 = 30 \cdot \frac{4}{1} \cdot 4 = 480\]

$t = 7.$

Interest = $3000 \cdot 4\% \cdot 7$

\[= 3000 \cdot \frac{4}{100} \cdot 7 = 30 \cdot \frac{4}{1} \cdot 7 = 840\]

#8. a. Write an expression in terms of $r$ for the amount of interest earned by $1600 deposited in an interest bearing account for 1 year. $1600 \cdot r$

b. How much interest will $1600 after 1 year in an account that pays 3% interest? $5\frac{1}{2}$% interest? 6.3% interest?

$1600 \cdot 3\% = 1600 \cdot \frac{3}{100} = 16 \cdot 3 = 48$

$1600 \cdot 5\frac{1}{2}\% = 1600 \cdot \frac{11}{2} \cdot \frac{100}{100} = 16 \cdot 5\frac{1}{2}$

\[= 16 \cdot \frac{11}{2} = 8 \cdot \frac{11}{1} = 88\]

Note: $5\frac{1}{2} = \frac{11}{2}$

$1600 \cdot 6.3\% = 1600 \cdot \frac{63}{100}$

\[= 16 \cdot 6.3 = 100.8\]

#14. a. Garth received 432 fewer votes than his opponent in the election. Choose a variable for the number of votes that Garth’s opponent received and then write an expression for the number of votes Garth received.

$n$: the number of votes that Garth’s opponent received

Garth received 432 fewer votes than $n$.

Garth received $n - 432$

b. $n = 3297$

$3297 - 432 = 2865$