Name: _____ Date: _____

Lesson 7.2 Evaluating Algebraic Expressions

Evaluate each expression for the given value of the variable.

Example

$u + 9$ when $u = 11$

$u + 9 = \underline{11} + 9$

$= \underline{20}$

1. $z - 13$ when $z = 20$

$z - 13 =$ _____ $- 13$

$=$ _____

2. $3m + 2$ when $m = 5$

$3m + 2 = 3 \cdot$ _____ $+ 2$

$=$ _____ $+ 2$

$=$ _____

3. $40 - 5p$ when $p = 6$

$40 - 5p = 40 - 5 \cdot$ _____

$= 40 -$ _____

$=$ _____

4. $\frac{2d}{9}$ when $d = 3$

$\frac{2d}{9} = \frac{2 \cdot \square}{9}$

$= \frac{\square}{9}$

$=$ _____

5. $\frac{e}{3} - 6$ when $e = 24$

6. $7 - \frac{r}{2}$ when $r = 4$

7. $\frac{21 - g}{4} + 6$ when $g = 5$

8. $\frac{10 - 2x}{10}$ when $x = 2$

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Evaluate each expression when $k = 2$.

9. $8k - 2$

10. $\frac{4k}{3}$

11. $\frac{9k}{5} - 2$

12. $\frac{6 + 3k}{6}$

Evaluate each of the following when $p = 3$.

13. The sum of $6p$ and 4.

14. The difference "12 less than $7p$".

15. The product of $(5 + 3p)$ and $(2p - 3)$.

16. The quotient of $(4p - 5)$ and $(5p - 1)$.

b) Percent increase $= \frac{27}{90} \times 100\%$

$= 30\%$

The percent increase in the price of the rug when Company B sold it to the customer was 30%.

12. a) Decrease in the price of car from 2007 to 2008

$= \$32{,}000 - \$24{,}000$

$= \$8{,}000$

Percent decrease $= \frac{8{,}000}{32{,}000} \times 100\%$

$= 25\%$

The percent decrease in the price of the car from 2007 to 2008 was 25%.

b) Percent decrease $= \frac{3{,}000}{24{,}000} \times 100\%$

$= 12.5\%$

The percent decrease in the price of the car from 2008 to 2009 was 12.5%.

13. a) 15% **b)** 25%

14. a) 20% **b)** 25%

15. a) Number of cards Max has at first

$= \frac{5}{8} \times 2{,}400$ cards

$= 1{,}500$ cards

$100\% \rightarrow 1{,}500$ cards

$1\% \rightarrow 1{,}500 \div 100 = 15$ cards

$10\% \rightarrow 10 \times 15$ cards $= 150$ cards

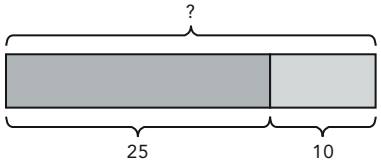
The increase in the number of cards that Max has is 150.

16. $90

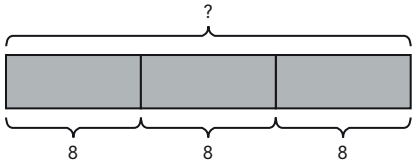
Chapter 7

Lesson 7.1

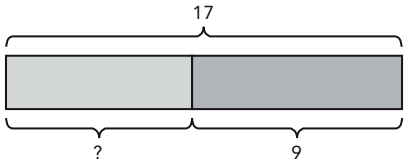
1.



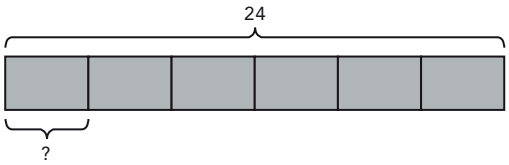
2.



3.



4.



5. The quotient of 8 and 15 is $\frac{8}{15}$. 8 is the dividend and 15 is the divisor.

6. sum **7.** difference

8. product **9.** $7 + j$

10. $m + 10$ **11.** $9 + x$

12. $3 + p$

13. a) $y + 2$ **b)** $y + 7$

14. $53 - a$ **15.** $r - 50$

16. $130 - b$ **17.** $60 - t$

18. a) $m - 5$ **b)** $m - 11$

19. $12e$ **20.** $74h$

21. $10n$ **22.** $4q$

23. $5k$ **24.** $\frac{p}{7}$

25. $\frac{h}{34}$ **26.** $\frac{h}{3}$

27. $\frac{50}{x}$ **28.** $\frac{65}{s}$

Lesson 7.2

1. $z - 13 = 20 - 13$

$= 7$

2. $3m + 2 = 3 \cdot 5 + 2$

$= 15 + 2$

$= 17$

3. $40 - 5p = 40 - 5 \cdot 6$

$= 40 - 30$

$= 10$

4. $\frac{2d}{9} = \frac{2 \cdot \boxed{3}}{9}$

$= \frac{\boxed{6}}{9}$

$= \frac{2}{3}$

5. 2 **6.** 5

7. 10 **8.** $\frac{3}{5}$

9. 14 **10.** $2\frac{2}{3}$

11. $1\frac{3}{5}$ **12.** 2

13. 22 **14.** 9

15. 42 **16.** $\frac{1}{2}$