# Number Operations 1.1

## *Overview of problems*

### *Example Set: A*

***Solve:***

1. What is the sum of 2 and 9?
2. What is the difference of 15 and 4?
3. What is the product of 3 and 7?
4. What is the quotient of 16 and 4?
5. What is the sum of 5.8, 1.6 and 2.9?
6. What is the difference of 329 and 144?
7. What is the product of 9, 3 and zero?
8. What is the quotient of 15 and 30?

### *Example Set: B*

***Evaluate the expressions:***

1. $17 - [3(2)]$
2. $[12 - 4(1)] + 6$
3. $[16 \div (3 + 1)] - 2$

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4. $\frac{14}{(10-3)\cdot 2}$

5. $4^2 + 3^2 + 2^2 + 1^2$

6. $(9-7)^2 \cdot (20-17)^2$

## *Example Set: C*

***Write the expressions using powers:***

1. $2 \cdot 2 \cdot 2$
2. $3 \cdot 3 \cdot 3 \cdot 3 \cdot 3$
3. "two to the tenth power"
4. $y \cdot y$
5. $3x \cdot 3x \cdot 3x \cdot 3x$
6. $xz \cdot xz \cdot xz \cdot xz \cdot xz$
7. $(g+h) \cdot (g+h) \cdot (g-h)$

## *Example Set: D*

***Evaluate the expressions:***

1. $|-3|$
2. $2^4$
3. $-3^2$
6. $|7|$
7. $(-3)^2$
8. $|-9| - |4|$

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4. $4^3$

5. $5 \cdot 4 \cdot 3 \cdot 2 \cdot 1$

9. $(-5)^3$

10. $\frac{0}{10{,}326} + \frac{11{,}451}{11{,}451}$

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### *Example Set: A -**ANSWER KEY***

***Solve:***

1. What is the sum of 2 and 9? =11
2. What is the difference of 15 and 4? =11
3. What is the product of 3 and 7? =21
4. What is the quotient of 16 and 4? =4
5. What is the sum of 5.8, 1.6 and 2.9? =10.3
6. What is the difference of 329 and 144? =185
7. What is the product of 9, 3 and zero? =0
8. What is the quotient of 15 and 30? $= \frac{1}{2}$

### *Example Set: B- **ANSWER KEY***

***Evaluate the expressions:***

1. $17 - [3(2)]$ =11
2. $[12 - 4(1)] + 6$ =14

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3. $[16 \div (3+1)] - 2$ =2

4. $\frac{14}{(10-3)\cdot 2}$ =1

5. $4^2 + 3^2 + 2^2 + 1^2$ =30

6. $(9-7)^2 \cdot (20-17)^2$ =36

## *Example Set: C-**ANSWER KEY***

***Write the expressions using powers:***

1. $2 \cdot 2 \cdot 2 = 2^3$

2. $3 \cdot 3 \cdot 3 \cdot 3 \cdot 3 = 3^5$

3. "two to the tenth power" $= 2^{10}$

4. $y \cdot y = y^2$

5. $3x \cdot 3x \cdot 3x \cdot 3x = (3x)^4$

6. $xz \cdot xz \cdot xz \cdot xz \cdot xz = (xz)^5$

7. $(g+h) \cdot (g+h) \cdot (g-h) = (g+h)^2(g-h)$

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### *Example Set: D-**ANSWER KEY***

***Evaluate the expressions:***

1. $|-3|$ =3
2. $2^4$ =16
3. $-3^2 = -9$
4. $4^3 = 64$
5. $5 \cdot 4 \cdot 3 \cdot 2 \cdot 1 = 120$
6. $|7|$ =7
7. $(-3)^2$ =9
8. $|-9| - |4| = 5$
9. $(-5)^3 = -125$
10. $\frac{0}{10{,}326} + \frac{11{,}451}{11{,}451} = 1$