

**Chapter 1**  
**Form F**

Choose the correct answer to each problem.

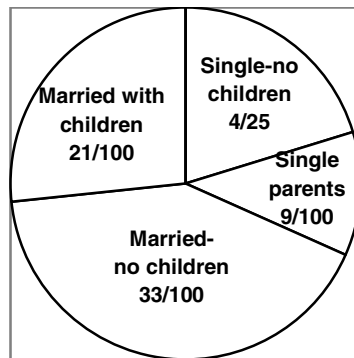
1. Find  $838 - [71 - (54 - 46) - 21]$   
a. 796                      b. 646                      c. 754                      d. 780
  
2. Find  $72 - 10 \div 2 + 8$   
a. 71                      b. 75                      c.  $-\frac{11}{40}$                       d.  $-\frac{7}{32}$
  
3. Find  $-\frac{5}{8} + 20$   
a.  $\frac{1}{6}$                       b.  $\frac{2}{12}$                       c.  $-\frac{8}{15}$                       d.  $\frac{8}{15}$
  
4. Divide  $\left(-\frac{12}{35}\right) \div \left(-\frac{9}{14}\right)$   
a.  $-\frac{2}{15}$                       b.  $\frac{2}{15}$                       c.  $-\frac{8}{15}$                       d.  $\frac{8}{15}$
  
5. Find  $(7 - 4)^3(4^2 - 3^2)$   
a. 63                      b. 1890                      c. 27                      d. 675
  
6. Find  $-15^2 + 5^2$   
a. -100                      b. -200                      c. 100                      d. -20
  
7. Find  $\left|-\frac{11}{13}\right|$   
a.  $\frac{11}{13}$                       b.  $-\frac{11}{13}$                       c.  $1\frac{2}{11}$                       d.  $-1\frac{2}{11}$
  
8. Find  $\frac{6 - 3(9 - 13)^2}{12^2 - 27}$   
a.  $-\frac{48}{117}$                       b.  $\frac{169}{4}$                       c.  $\frac{48}{117}$                       d.  $-\frac{14}{39}$

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9. Simplify  $7 - 2(14x - 2y) + 4(x - 4y)$   
a.  $74x - 26y$       b.  $-24x - 20y + 7$       c.  $-24x - 12y + 7$       d.  $74x - 6y$
10. Simplify  $2[x - y + 2 + (3x + 6)]$   
a.  $5x - 2y + 10$       b.  $8x - 2y + 16$       c.  $3xy + 10$       d.  $6xy + 16$
11. Simplify  $4x^3 + 6x^2 - 3x^3 + 6x^3$   
a.  $1^6 + 12x^5$       b.  $x^3$       c.  $7x^3 + 6x^2$       d.  $x^{11}$
12. Evaluate  $-2x^2 - x + 4$  for  $x = -3$   
a.  $-11$       b.  $43$       c.  $-17$       d.  $17$
13. What is the best classification for  $0.777$ ?  
a. Irrational number, real number      b. Rational number, real number  
c. Real number      d. Integer, rational number, real number

For problem 14, the circle graph below shows the family status of teachers in the local school district.



14. If there are 1600 teachers in the district, how many are married with no children?  
a. 528      b. 256      c. 144      d. 672
15. Identify the property or operation that is illustrated by  $(2 + 9) + 7 = 2 + (9 + 7)$ .  
a. Commutative property of multiplication      b. Distributive property  
c. Associative property of addition      d. Commutative property of addition

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16. Identify the property or operation that is illustrated by  $(7 \cdot x) \cdot 3 = (x \cdot 7) \cdot 3$
- a. Commutative property of multiplication
  - b. Commutative property of addition
  - c. Associative property of multiplication
  - d. Associative property of addition
17. The formula for the surface area,  $S$ , of a closed cylinder is  $S = 2\pi r^2 + 2\pi rh$  where  $\pi$  is approximately 3.14,  $h$  is the height and  $r$  is the radius. If the height of a cylinder is 4 inches and the radius is 6 inches, what is the approximate surface area of the cylinder?
- a. 226.08 square inches
  - b. 114.04 square inches
  - c. 188.4 square inches
  - d. 376.8 square inches
18. Multiply:  $(-5)(-4)(0)(-3)(-1)(2)$
- a. 120
  - b. 0
  - c. -120
  - d. 100
19. Translate to an algebraic expression or equation.
- Five less than twice the sum of a number and six is equal to  
The difference of four times the number and nine.
- a.  $5 - 2x + 6 = 4x - 9$
  - b.  $5 - (x + 6) = 4(x - 9)$
  - c.  $2x - 5 - 6 = 4x - 9$
  - d.  $2(x + 6) - 5 = 4x - 9$
20. Find the solution:  $-4 - x = 2x + 11$
- a. -15
  - b. -5
  - c. 7
  - d. -2