

## AP Chapter 4-5 Test

**Write the number in standard form.**

1.  $7.18 \times 10^{-8}$

2.  $1.305 \times 10^7$

**Write the number in scientific notation.**

3. Storage capacity (in bytes) of a 4-gigabyte computer: 4,000,000,000

4. Mass of a dust particle: 0.000000000753 kilograms

**Find the greatest common factor and least common multiple.**

5.  $16a^4b^2$ ,  $40ab$

6.  $10m^3n^2$ ,  $24mn^3$

**Simplify. Write your answer using only positive exponents.**

7.  $3ab^{-5} \cdot 2a^{-2}b^3$

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8.  $xy^4 \cdot x^{-2}y^{-2}$

9.  $\frac{4g^5h^3}{8g^2h}$

10.  $\frac{6c^2d^2}{cd}$

11.  $\frac{26m^5n^7}{12m^2n^2}$

**Simplify the expression.**

12.  $\frac{4c}{9} + \frac{8c}{9}$

13.  $\frac{26}{15n} + \left(-\frac{8}{15n}\right)$

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**Simplify the expression.**

14.  $\frac{4w}{3} + \left(-\frac{2w}{11}\right)$

**Solve the equation.**

15.  $\frac{2}{3}y = 4$

16.  $-\frac{3}{7}c = -6$

17.  $-\frac{8}{17}v = 16$

18.  $\frac{3}{7}v + 5 = 32$

19.  $\frac{6}{13}t - 3 = 9$

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**Solve the equation by first clearing the fractions or decimals.**

20.  $\frac{1}{2}t + \frac{5}{12} = \frac{5}{6}$

21.  $-\frac{7}{10} = \frac{3}{4}a - \frac{13}{20}$

22.  $3.4n + 6.2 = -7.4$

23.  $11.6b - 5 = 9.5$

**Solve the inequality.**

24.  $\frac{1}{2}m + 1 > \frac{7}{4}$

25.  $\frac{2}{5}k - \frac{4}{15} \geq -\frac{2}{3}$

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Answer Section**

1. 0.0000000718
2. 13,050,000
3.  $4.0 \times 10^9$  bytes
4.  $7.53 \times 10^{-10}$  kg
5.  $8ab$
6.  $2mn^2$
7.  $\frac{6}{ab^2}$
8.  $\frac{y^2}{x}$
9.  $\frac{g^3h^2}{2}$
10.  $6cd$
11.  $\frac{13m^3n^5}{6}$
12.  $\frac{4c}{3}$
13.  $\frac{6}{5n}$
14.  $\frac{38w}{33}$
15. 6
16. 14
17. -34
18. 63
19. 26
20.  $\frac{5}{6}$
21.  $-\frac{1}{15}$
22. -4
23. 1.25
24.  $m > 1\frac{1}{2}$
25.  $k \geq -1$