

# Ch. 1 Practice Test

Name \_\_\_\_\_

Show all work on loose-leaf paper. Final answers must appear on this Test Answer Document.

Algebra - Chapter 1  
\*NO Calculators Allowed

1.) \_\_\_\_\_

2.) \_\_\_\_\_

3.) \_\_\_\_\_

4.) \_\_\_\_\_

5.) \_\_\_\_\_

6.) \_\_\_\_\_

7.) \_\_\_\_\_

8.) \_\_\_\_\_

9.) \_\_\_\_\_

10.) \_\_\_\_\_

11.) \_\_\_\_\_

12.) \_\_\_\_\_

13.) \_\_\_\_\_

14.) \_\_\_\_\_

15.) \_\_\_\_\_

16.) \_\_\_\_\_

17.) \_\_\_\_\_

18.) \_\_\_\_\_

19.) \_\_\_\_\_

20.) \_\_\_\_\_

21.) \_\_\_\_\_

22.) \_\_\_\_\_

23.) \_\_\_\_\_

24.) \_\_\_\_\_

25.) \_\_\_\_\_

26.) \_\_\_\_\_

27.) \_\_\_\_\_

28.) \_\_\_\_\_

29.) \_\_\_\_\_

30.) \_\_\_\_\_

31.) \_\_\_\_\_

32.) \_\_\_\_\_

**Chapter 1: Directions: Do NOT forget labels! Final answers MUST appear on the Test Answer Sheet. DO NOT WRITE ON THIS TEST! Always simplify.**

**#1 & 2: What is an algebraic expression for the word phrase?**

1. 7 less than the product of 5 and n
2. the sum of 13 and twice a number y

3. **What is the simplified form of this expression?**  $\frac{8[(4 - 6)^3 + 7]^3}{2}$

4. Evaluate  $u + xy$ , for  $u = 5$ ,  $x = 6$ , and  $y = 4$ .
5. Evaluate  $-(ab)^2 \div (-8)$  for  $a = 2$  and  $b = 4$

\_\_\_\_\_ 6. Multiple Choice: To which subsets of the real numbers does the number  $(64/4)$  belong?  
a. whole numbers, integers, and rational numbers only  
b. whole numbers, natural numbers, and integers only  
c. integers, rational numbers, natural numbers, and whole numbers  
d. rational numbers only

\_\_\_\_\_ 7. Multiple Choice: To which subsets of the real numbers does the number  $\sqrt{18}$  belong?  
a. whole numbers, natural numbers, integers  
b. whole numbers, integers, rational numbers  
c. rational numbers  
d. irrational numbers

\_\_\_\_\_ 8. Multiple Choice: What is an inequality that compares the numbers  $\sqrt{29}$  and  $5\frac{2}{3}$ ?  
a.  $\sqrt{29} > 5\frac{2}{3}$   
b.  $\sqrt{29} < 5\frac{2}{3}$

9. What is the order of  $-\sqrt{3}$ ,  $-\frac{13}{5}$ ,  $-2.1$ ,  $-2\frac{1}{4}$  from least to greatest?

10. You earn the same amount each week at your part-time job. The total amount you earn in 4 weeks is \$460. How much do you earn per week? Do not forget to label your answer.

**#11-13: Simplify each expression.**

\_\_\_\_\_ 11.  $\frac{-64b}{-100ab}$

\_\_\_\_\_ 12.  $(-12 + 57) - 4$

13.  $-10(5g)$

**#14-20: Simplify: What is each sum, difference, product, or power?**

14.  $-10 + 4$

15.  $\frac{7}{9} + \frac{5}{12}$

16.  $-7.4 - 8.9$

17.  $2 - 2$

18. A stock market's starting price per share is \$52.17 at the beginning of the week. During the week, the price changes by gaining \$1.36, then losing \$3.88, then losing \$2.11 more and finally gaining \$2.41. What is the ending stock price? Do not forget to label your answer.

19.  $-9(-7)$

20.  $\left(\frac{3}{4}\right)^2$

**#21-27: What is the simplified form of each expression?**

21.  $-\sqrt{81}$

22.  $\pm\sqrt{\frac{196}{36}}$

23.  $\frac{3}{2}(-6m + 20)$

24.  $(-1 - 9c)(-10)$

25.  $4.8r^2 + 6.7r - 7.7r + 4.2r^2 - 3.2r$

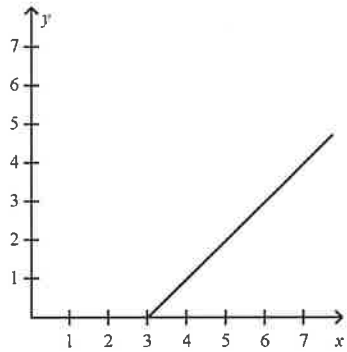
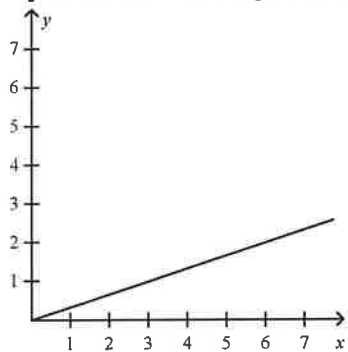
26.  $-(13x - 12k)$

27.  $\frac{24x - 3}{4}$

\_\_\_ 28. Multiple Choice: Is  $x = 1$  a solution of the equation  $2 - 4x = 2$ ?  
a. yes    b. no

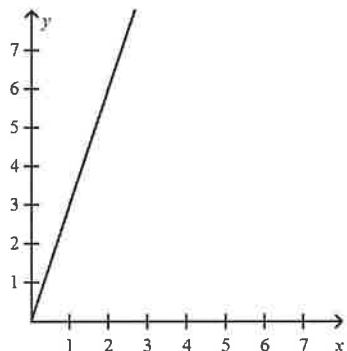
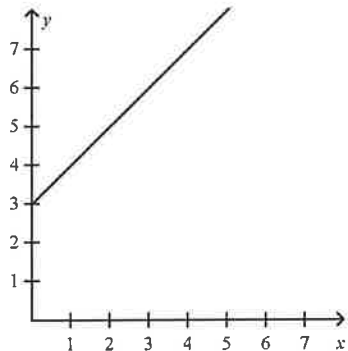
\_\_\_ 29. Multiple Choice: Which ordered pair is a solution of the equation  $y = -3x$ ?  
a.  $(-1, -3)$                                       c.  $(-7, 21)$   
b.  $(0, 15)$                                         d.  $(-6, 21)$

\_\_\_ 30. Multiple Choice: Mary and her best friend Dot have the same birthday, but Mary is 3 years older than Dot. Let the variable  $y$  represent Mary's age and  $x$  represent Dot's age. Which graph models the relationship between Dot's age and Mary's age?



a.

c.



b.

d.

31. Simplify the expression  $2xy + 10x^2y - 3xy + 5x^2$ .

32. What is the coefficient of each of the terms listed above?

Name

Key

\* WORK attached

Algebra - Chapter 1

\*NO Calculators Allowed

Show all work on loose-leaf paper. Final answers must appear on this Test Answer Document.

1.)  $5n-7$

2.)  $13+2y$

\* 3.)  $-4$

\* 4.)  $29$

\* 5.)  $8$

6.)  $C$

7.)  $D$

\* 8.)  $B$

\* 9.)  $-\frac{13}{5}, -2\frac{1}{4}, -2.1, -\sqrt{3}$  \* Write the # in original form.

\* 10.)  $\$115$  \*Do not forget label  
 $\frac{16}{25a}$

\* 11.)  $25a$

\* 12.)  $-16+5r$  or  $5r-16$

13.)  $-50g$

14.)  $-6$

\* 15.)  $\frac{13}{36}$

\* 16.)  $-16.3$

17.)  $0$

\* 18.)  $\$49.95$  \*Do not forget label!

19.)  $63$

\* 20.)  $\frac{9}{16}$

21.)  $-9$

\* 22.)  $+\frac{7}{3}$  or  $+\frac{1}{3}$  \* Need both signs

\* 23.)  $-21m+70$

\* 24.)  $10+90c$

\* 25.)  $9r^2-4.2r$

\* 26.)  $-13x+12K$

\* 27.)  $6x-\frac{3}{4}$

\* 28.)  $B$  (No)

\* 29.)  $C$

30.)  $B$

\* 31.)  $10x^2+5x^2-1xy$

32.)  $10, 5, -1$

$$3) \frac{8[(4-6)^3 + 7]^3}{2}$$

$$\frac{8[(-2)^3 + 7]^3}{2}$$

$$\frac{8[(-8+7)]^3}{2}$$

$$\frac{8[-1]^3}{2}$$

$$\frac{8(-1)}{2}$$

$$\frac{-8}{2}$$

$$\boxed{-4}$$

$$4) \begin{array}{l} u + xy \\ (5) + (6)(4) \\ 5 + 24 \\ \boxed{29} \end{array}$$

$$5) -(ab)^2 \div (-8)$$

$$-((2)(4))^2 \div (-8)$$

$$-(8)^2 \div (-8)$$

$$-(64) \div (-8)$$

$$\boxed{8}$$

$$8) \sqrt{29} \quad \boxed{?} \quad 5\frac{2}{3}$$

$$\begin{array}{c} \wedge \\ \sqrt{25} \quad \sqrt{36} \end{array}$$

$$5\frac{4}{11}$$

or

$$\approx 5\frac{36}{99}$$

or

$$\approx 5.\overline{36} < 5.\overline{6}$$

$$\boxed{\sqrt{29} < 5\frac{2}{3}}$$

9)  $-\sqrt{3}, -\frac{13}{5}, -2.1, -2\frac{1}{4}$

$\downarrow$   
 greater than  $-2$ ,  
 since  $-\sqrt{4} = -2$ ,  $-2\frac{3}{5}$   
 or  
 $-2.6$

$-2.25$

least to greatest  $\rightarrow$

$-\frac{13}{5}, -2\frac{1}{4}, -2.1, -\sqrt{3}$

10)  $\begin{array}{r} \$115 \\ 4 \overline{) 460} \\ \underline{4} \phantom{0} \\ 06 \\ \underline{4} \phantom{0} \\ 20 \\ \underline{20} \\ 0 \end{array}$

11)  $\frac{-64b}{-100ab} = \frac{\overset{16}{\cancel{-64}b}}{\underset{25}{\cancel{-100}ab}} = \frac{16}{25a}$

12)  $\begin{array}{l} (-12 + 5r) - 4 \\ \underline{-12 + 5r - 4} \\ -16 + 5r \end{array}$

$$15) \quad \frac{7}{9} + -\frac{5}{12}$$

$$\frac{28}{36} + -\frac{45}{36}$$

$$\frac{-17}{36}$$

$$22) \quad \pm \sqrt{\frac{196}{36}}$$

$$\pm \frac{\sqrt{196}}{\sqrt{36}} = \frac{14}{6}$$

$$\pm 2\frac{1}{3} \text{ or } \pm \frac{7}{3}$$

$$16) \quad \begin{array}{r} -7.4 \\ + -8.9 \\ \hline -16.3 \end{array}$$

$$23) \quad \frac{7}{2} \left( \frac{-6m}{1} + \frac{20}{1} \right)$$

$$\left( \frac{7}{2} \cdot \frac{-6m}{1} \right) + \left( \frac{7}{2} \cdot \frac{20}{1} \right)$$

$$-21m + 70$$

$$18) \quad \begin{array}{r} 52.17 \\ + 1.36 \\ \hline 53.53 \\ - 5.99 \\ \hline 47.54 \\ + 2.41 \\ \hline 49.95 \end{array}$$

$$24) \quad (-1 - 9c)(-10)$$

$$10 + 90c$$

$$20) \quad \left( \frac{3}{4} \right)^2$$

$$\frac{3}{4} \cdot \frac{3}{4}$$

$$\frac{9}{16}$$

$$\frac{3^2}{4^2}$$

$$\frac{9}{16}$$

$$25) \quad \begin{array}{r} 4.8r^2 + 6.7r - 7.7r + \\ \hline 4.2r^2 - 3.2r \end{array}$$

$$\begin{array}{r} 4.8r^2 \\ + 4.2r^2 \\ \hline 9.0r^2 \end{array}$$

$$\begin{array}{r} 6.7r \\ - 7.7r \\ \hline -1r \\ + -3.2r \\ \hline -4.2r \end{array}$$

$$-4.2r \Rightarrow$$



$$9r^2 - 4dr$$

$$26) \begin{array}{l} -(13x - 12k) \\ -13x + 12k \end{array}$$

$$27) \frac{24x - 3}{4}$$

$$\frac{24x}{4} - \frac{3}{4}$$

$$6x - \frac{3}{4}$$

$$28) 2 - 4(1) = 2$$

$$2 - 4 = 2$$

$$-2 \neq 2$$

NO

$$29) a) y = -3x, (-1, -3)$$

$$-3 = -3(-1)$$

$$-3 \neq 3$$

NO

$$31) \underline{2xy} + 10x^2y - \underline{3xy} + 5x^2$$

$$10x^2y + 5x^2 - 1xy$$

$$b) y = -3x, (0, 15)$$

$$15 = -3(0)$$

$$15 \neq 0$$

NO

$$c) y = -3x, (-7, 21)$$

$$21 = -3(-7)$$

$$21 = 21 \checkmark$$

Yes

$$d) y = -3x, (-6, 21)$$

$$21 = -3(-6)$$

$$21 \neq 18$$

NO

31

NO

↑  
up to top