

# ALEKS® Test 1 #1

Developmental Math / Quantitative Reasoning Part 1 – 54680/QR1-057-F15 MWF 9:00-9:50 AM (Clapp)

Student Name/ID:

1. Evaluate the following.

$$3 + 25 \div 5 + 3 \times 7$$

2. Find the least common multiple (LCM) of 6 and 8.

3. Multiply.

$$\frac{3}{4} \times 24$$

4. Multiply. Write your answer as a mixed number in simplest form.

$$2\frac{7}{9} \times 2\frac{1}{5}$$

5. Evaluate. Write your answer as a fraction in simplest form.

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

6.

(a) Aldo bought 13 pounds of flour for \$7. How many dollars did he pay per pound of flour?

(b) A color printer prints 7 pages in 3 minutes. How many pages does it print per minute?

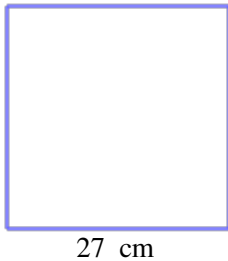
If necessary, round your answers to the nearest hundredth.

7. Ivan drove 936 miles in 13 hours.

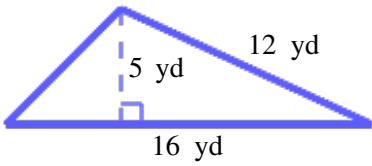
At the same rate, how many miles would he drive in 11 hours?

8. Write  $\frac{17}{25}$  as a percentage.

9. Find the perimeter of the square. Be sure to write the correct unit in your answer.

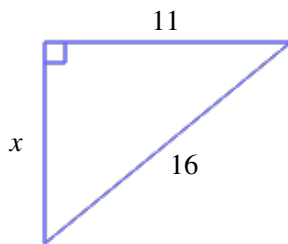


- 10.** Find the area of the triangle below.  
Be sure to include the correct unit in your answer.



- 11.** What number is equal to  $\sqrt{9}$ ?

- 12.** For the following right triangle, find the side length  $x$ . Round your answer to the nearest hundredth.



- 13.** A pet store has 7 cats. Here are their weights (in pounds).

16, 7, 15, 15, 16, 13, 7

Find the mean weight of these cats.  
If necessary, round your answer to the nearest tenth.

14. Evaluate the following.

$$|-15| = \square$$

$$|9| = \square$$

15. Use  $<$ ,  $>$ , or  $=$  to compare the following numbers.

$$-10 \square -3$$

$$-1 \square -4$$

$$7 \square -6$$

16. Add.

$$\frac{8}{-3} + \frac{9}{4}$$

Write your answer as a fraction in simplest form.

17. Multiply.

$$\frac{-4}{8} \cdot \frac{1}{-7} \cdot 5$$

Write your answer in simplest form.

18. Evaluate.

$$(-9)^2 = \square$$

$$(-4)^3 = \square$$

19. Evaluate. Write your answers as fractions.

$$\left(-\frac{3}{2}\right)^2 =$$
$$\frac{5}{4^3} =$$

20. Simplify.

$$4(w - 3) - 8w$$

21. Solve for  $w$ .

$$-21 = -\frac{3}{7}w$$

Simplify your answer as much as possible.

22. Solve for  $x$ .

$$-2(8x - 5) + 2x = 4(x + 5)$$

Simplify your answer as much as possible.

23. Solve for  $x$ .

$$y = (x - 8)m$$

**24.** Translate this phrase into an algebraic expression.

*Four more than the product of 23 and Greg's height*

Use the variable  $g$  to represent Greg's height.

**25.** The length of a rectangle is 4 yd longer than its width.  
If the perimeter of the rectangle is 40 yd, find its area.

**26.** The sets  $A$  and  $E$  are given below.

$$A = \{1, 2, 3, 4, 6\}$$

$$E = \{0, 2, 3, 8\}$$

Find the union of  $A$  and  $E$ .

Find the intersection of  $A$  and  $E$ .

Write your answers using set notation.

**Test 1 #1 Answers for class Developmental Math /  
Quantitative Reasoning Part 1 – 54680/QR1-057-F15 MWF  
9:00-9:50 AM**

1. 29

2. 24

3. 18

4.  $6\frac{1}{9}$

5.  $\frac{27}{64}$

6. (a) 0.54 dollars per pound

(b) 2.33 pages per minute

7. 792 miles.

8. 68%

9. 108 cm

10.  $40 \text{ yd}^2$

11. 3

12. 11.62

13. 12.7 pounds

14.  $|-15| = 15$   
 $|9| = 9$

15.  $-10 < -3$   
 $-1 > -4$   
 $7 > -6$

16.  $-\frac{5}{12}$

17.  $\frac{5}{14}$

18.  $(-9)^2 = 81$   
 $(-4)^3 = -64$

19.  $\left(-\frac{3}{2}\right)^2 = \frac{9}{4}$   
 $\frac{5}{4^3} = \frac{5}{64}$

20.  $-4w - 12$

21.  $w = 49$

22.  $x = -\frac{5}{9}$

23.  $x = \frac{y}{m} + 8$

24.  $23g + 4$

25.  $96\text{yd}^2$

26.  $A \cup E = \{0, 1, 2, 3, 4, 6, 8\}$   
 $A \cap E = \{2, 3\}$