

11 Word Problems

Use the TI30XS calculator! Answers on the last page – don't cheat! 😊

1. An insurance plan for a family of 6 costs \$3000 per year, and it covers 100% of any preventive health charges. If 4 of the family members had \$800 in expenses and 2 of the family members had \$750 in expenses, how much did the family save by buying the plan?
 - A. \$1500
 - B. \$1700
 - C. \$1900
 - D. \$2100
2. If you want to cut 24 two-foot cubes, how many 12-foot boards (like the one below) will you need?
 - A. 2
 - B. 4
 - C. 6
 - D. 12
3. You can drive 180 miles in 3 hours. On Friday, you drove for 7 hours at that rate. How many miles did you drive on Friday?
 - A. 1260
 - B. 600
 - C. 420
 - D. 60
4. There are 3 weights: 0.581 grams, 0.0643 grams, and 0.6 grams. List the weights in order from greatest to least.
 - A. 0.6 grams, 0.581, 0.0643
 - B. 0.6, 0.0643, 0.581
 - C. 0.0643, 0.581, 0.6
 - D. 0.581, 0.6, 0.0643



5. How much longer is $4\frac{1}{16}$ than $1\frac{3}{8}$?

- A. $\frac{5}{8}$
- B. $2\frac{1}{16}$
- C. $2\frac{11}{16}$
- D. $2\frac{3}{8}$

6. You cut two pieces, each $3\frac{3}{4}$ from a 12-foot piece of wood. How long, in feet, is the remaining piece?

- A. $1\frac{5}{8}$
- B. $4\frac{1}{2}$
- C. $9\frac{3}{4}$
- D. $2\frac{1}{2}$

7. You drove 165 miles in 2.5 hours. Which of the expressions below could be used to find out how many miles you can drive in 8 hours?

- A. $2.5 \times 8 \div 165$
- B. $165 \times 8 \div 2.5$
- C. $165 \times 8 \times 2.5$
- D. $165 \div 8 \times 2.5$

8. The scale on a map reads "2cm=125 km." How many kilometers would be represented by 4.8 centimeters?

- A. 300
- B. 345
- C. 600
- D. 1200



9. In Phoenix, the temperature at 9am was 92°F. Then, over the next hour the following changes happened: +2°F, - 5°F, +6°F, -1°F, +8°F, +9°F. What was the temperature in degrees Fahrenheit at the end of the hour?

- A. 92°F
- B. 96°F
- C. 101°F
- D. 111°F

BRAIN TEASERS

This is a multiplication box. Each cell represents the horizontal number times the vertical number. For example, the 20 in the right corner equals 5 x 4.

| | | | |
|---|-------|----|----|
| | a^2 | ab | 5 |
| a | | | ab |
| c | 8b | | |
| 4 | | 40 | 20 |

10. Which of the following is equal to a?

- A. 2
- B. 4
- C. 5
- D. 10

11. Which of the following is equal to a^2c ?

- A. 13
- B. 40
- C. 60
- D. 42



ANSWERS

1. An insurance plan for a family of 6 costs \$3000 per year, and it covers 100% of any preventive health charges. If 4 of the family members had \$800 in expenses and 2 of the family members had \$750 in expenses, how much did the family save by buying the plan?

- A. \$1500
- B. \$1700
- C. \$1900
- D. \$2100

Handwritten calculations for Question 1:

$$\begin{array}{r} \$800 \\ \times 4 \\ \hline \$3200 \end{array}$$

$$\begin{array}{r} \$750 \\ \times 2 \\ \hline \$1500 \end{array}$$

Add the totals

$$\begin{array}{r} 3200 \\ + 1500 \\ \hline \$4700 \end{array}$$

Subtract

$$\begin{array}{r} \$4700 \\ - 3000 \\ \hline \$1700 \end{array}$$

Find the totals

2. If you want to cut 24 two-foot cubes, how many 12-foot boards (like the one below) will you need?

- A. 2
- B. 4
- C. 6
- D. 12

Diagram of a 12-foot board divided into 6 sections, each 2 feet long.

Handwritten calculations:

$$12 \div 2 = 6$$

you want 24 of these

$$24 \div 6 = 4$$

3. You can drive 180 miles in 3 hours. On Friday, you drove for 7 hours at that rate. How many miles did you drive on Friday?

- A. 1260
- B. 600
- C. 420
- D. 60

Handwritten calculations for Question 3:

$$\frac{180 \text{ miles}}{3 \text{ hours}} = 60 \text{ miles/hr (rate)}$$

Use the distance formula $d = r \times t$

$$60 \times 7 \text{ hrs} = 420 \text{ miles}$$

4. There are 3 weights: 0.581 grams, 0.0643 grams, and 0.6 grams. List the weights in order from greatest to least.

- A. 0.6, 0.581, 0.0643
- B. 0.6, 0.0643, 0.581
- C. 0.0643, 0.581, 0.6
- D. 0.581, 0.6, 0.0643

Handwritten explanation for Question 4:

I like to turn these into percents % by multiplying by 100 (or just move the decimal to the right).

$$0.6 = 60\%$$

$$0.581 = 58.1\%$$

$$0.0643 = 6.43\%$$


5. How much longer is $4\frac{1}{16}$ than $1\frac{3}{8}$? *Use your calculator!*

- A. $\frac{5}{8}$
- B. $2\frac{1}{16}$
- C. $2\frac{11}{16}$**
- D. $2\frac{3}{8}$

6. You cut two pieces, each $3\frac{3}{4}$ from a 12-foot piece of wood. How long, in feet, is the remaining piece?

- A. $1\frac{5}{8}$
- B. $4\frac{1}{2}$**
- C. $9\frac{3}{4}$
- D. $2\frac{1}{2}$

$$3\frac{3}{4} \times 2 = 7\frac{1}{2} \quad 12 - 7\frac{1}{2} = 4\frac{1}{2}$$

USE YOUR CALCULATOR

7. You drove 165 miles in 2.5 hours. Which of the expressions below could be used to find out how many miles you can drive in 8 hours?

- A. $2.5 \times 8 \div 165$
- B. $165 \times 8 \div 2.5$**
- C. $165 \times 8 \times 2.5$
- D. $165 \div 8 \times 2.5$

$$\frac{165 \text{ miles}}{2.5 \text{ hrs}} \times \frac{8 \text{ hrs}}{1} = \frac{165 \times 8}{2.5} = 2.5 \times \frac{165 \times 8}{2.5}$$

CROSS multiply

8. The scale on a map reads "2cm=125 km." How many kilometers would be represented by 4.8 centimeters?

- A. 300**
- B. 345
- C. 600
- D. 1200

$$\frac{2 \text{ cm}}{125 \text{ km}} \times \frac{4.8}{x}$$

CROSS multiply

$$\frac{2x}{2} = \frac{125(4.8)}{2} \quad x = 300$$



9. In Phoenix, the temperature at 9am was 92°F. Then, over the next hour the following changes happened: +2°F, - 5°F, +6°F, -1°F, +8°F, +9°F. What was the temperature in degrees Fahrenheit at the end of the hour?

- A. 92°F
- B. 96°F
- C. 101°F
- D. 111°F**

Use your calculator
 $92 + 2 - 5 + 6 - 1 + 8 + 9 =$

BRAIN TEASERS

This is a multiplication box. Each cell represents the horizontal number times the vertical number. For example, the 20 in the right corner equals 5 x 4.

| | | | |
|--------|-------|----------|----------|
| | a^2 | ab 10 | 5 |
| a 2 | | | ab 10 |
| c | 8b | | |
| 4 | | 40 | 20 |

10. Which of the following is equal to a?

- A. 2**
- B. 4
- C. 5
- D. 10

Focus on the 40 $\rightarrow \frac{4}{4} \times ab = \frac{40}{4}$
 $ab = 10$ - If $ab = 10$ and the ab box is under the #5, then $a = 2$

11. Which of the following is equal to a^2c ?

- A. 13
- B. 40**
- C. 60
- D. 42

$a^2c = 8b$ \rightarrow From the previous question we know $a = 2$ and $b = 5$ so $8b$ is $8(5)$ which = 40

