

**LEVEL: EMERGING**

**SOLVING PROPORTIONS:** Directions: Solve the proportion. Check your solution.

1)  $\frac{2}{3} = \frac{4}{x}$

2)  $\frac{3}{y} = \frac{15}{35}$

3)  $\frac{10}{45} = \frac{v}{27}$

4)  $\frac{3k}{27} = \frac{2}{3}$

5)  $\frac{6}{t+4} = \frac{42}{77}$

6)  $\frac{n}{n-2} = \frac{9}{5}$

**MULTIPLE CHOICE:** Directions: What is the value of the variable in each proportion?

7)  $\frac{15}{-2h} = \frac{10}{12}$

- a) 9
- b) -18
- c) 18
- d) -9

8)  $\frac{7}{y-14} = \frac{21}{y+18}$

- a) -48
- b) -16
- c) 3
- d) 30

**ERROR ANALYSIS:** Directions: *Describe* and correct the error in solving the proportion

9)  $\frac{4}{3} = \frac{16}{x}$   
 $4 \cdot 16 = 4 \cdot x$   
 $64 = 4x$   
 $16 = x$

10)  $\frac{18}{14} = \frac{b+2}{2}$   
 $18b = 14b + 2$   
 $4 = 2$   
 $b = 0.5$

**WRITE AND SOLVING PROPORTIONS:** Directions: Solve the proportion. Check your solution

11) At a book sale, 6 books cost \$13. At that rate, how many books can you buy for \$32.50?



12) The wingspan of a jet plane is 22.5m. If a model of the plane is built to scale where 1 cm = 3m, what is the wingspan of the model?



Answers:

1)  $x = 6$  2)  $y = 7$  3)  $v = 6$  4)  $k = 6$  5)  $t = 7$  6)  $n = \frac{9}{2}$  7) D 8) D 9) They multiplied the numerators together 10) Answers may vary 11)  $\frac{6 \text{ books}}{\$13} = \frac{x}{\$32.50}$  ;  $x = 15 \text{ books}$  12)  $x = 7.5\text{cm}$

**LEVEL: PROFICIENT****SOLVING PROPORTIONS:** Directions: Solve the proportion. Check your solution

15)  $\frac{7}{3} = \frac{2x+5}{2x}$

16)  $\frac{24}{5z+5} = \frac{4}{z-1}$

17)  $\frac{m+1}{4} = \frac{3m+6}{7}$

18)  $\frac{k-8}{7+k} = \frac{-1}{5}$

19)  $\frac{2}{-3} = \frac{4v+4}{2v+14}$

20)  $\frac{6}{4+2w} = \frac{-2}{w-10}$

**LEVEL: MASTERY****WRITE AND SOLVING PROPORTIONS:** Directions: Solve the proportion. Check your solution

- 21) You are making a cookie recipe that calls for 2 cups of flour and 4 eggs. You have 6.5 cups of flour, and you want to use it all up. How many eggs will you use.



- 22) If the ratio of tin to silver in 78 pounds of a certain alloy is 12:1, how much silver is in the alloy if there are 36 pounds of tin??

- 23) A theater has 1,500 seats. One night, 9 out of every 10 seats were filled. How many people attended that night?

**SOLVING PROPORTIONS:** Directions: Solve the proportion. Check your solution

24)  $\frac{n+0.3}{n-3.2} = \frac{9}{2}$

25)  $\frac{-3}{11} = \frac{5-h}{h+1.4}$

26)  $\frac{16.5+3t}{3} = \frac{0.9-t}{-5}$