

I'm not robot!



Handwritten notes and diagrams at the top left of the page, including a small diagram of a cube and some algebraic expressions.

Name: \_\_\_\_\_ ID: A

10. Last year, your team bought 14 baseball caps for \$70. This year, the cost per cap is the same. Write a proportion that gives the cost  $c$  of buying 12 baseball caps.

Solve the proportion.

$$\frac{14}{70} = \frac{12}{c}$$

$$14c = 840$$

$$c = 60$$

11.  $\frac{8}{56} = \frac{w}{8}$

$$8 \cdot 8 = 56 \cdot w$$

$$64 = 56w$$

$$w = 1.14$$

12.  $\frac{11}{c+2} = \frac{33}{24}$

$$11(24) = 33(c+2)$$

$$264 = 33c + 66$$

$$198 = 33c$$

$$c = 6$$

13.  $\frac{2x}{15} = \frac{70}{75}$

$$15(70) = 2x(75)$$

$$1050 = 150x$$

$$x = 7$$

14.  $\frac{10x}{5} = \frac{70}{6.5}$

$$2x = 10.77$$

$$x = 5.38$$

15.  $\frac{48}{x} = \frac{85}{18}$

$$48 \cdot 18 = 85x$$

$$864 = 85x$$

$$x = 10.15$$

16. Use multiplication to solve the proportion.

$$\frac{16}{24} = \frac{11}{x}$$

$$16x = 264$$

$$x = 16.5$$

17. The graph of a proportional relationship passes through the given point and  $(1, 2)$ . Find  $y$ .

Given point:  $(3, 15)$

$$\frac{3}{15} = \frac{1}{y}$$

$$y = 5$$

18. Given point:  $(3, 15)$

$$\frac{3}{15} = \frac{1}{y}$$

$$y = 5$$

19.  $y = kx$ ;  $x = 9$

$$k = \frac{y}{x} = \frac{6}{9} = \frac{2}{3}$$

$$y = \frac{2}{3}x$$

20. Write a direct variation equation that relates  $x$  liters to  $y$  quarts.

| Length          | Capacity      | Weight and Mass |
|-----------------|---------------|-----------------|
| 1 in. = 2.54 cm | 1 qt = 0.95 L | 1 lb = 0.45 kg  |
| 1 mi = 1.6 km   |               |                 |

21. A store sells three different packs of the same yogurt. Which pack is the best buy? Explain.

| Pack | Price  | Volume | Unit Price |
|------|--------|--------|------------|
| 1    | \$0.57 | 1 qt   | \$0.57/qt  |
| 2    | \$0.62 | 1 qt   | \$0.62/qt  |
| 3    | \$0.65 | 1 qt   | \$0.65/qt  |

The 1st pack is the best buy because each cost less than the others.

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14. 180% of what number is 72?

$$1.8x = 72$$

$$x = 40$$

15. 40% of 250 is what number?

$$0.4 \cdot 250 = x$$

$$x = 100$$

16. A basketball player made 75 baskets in a season. Of these, 8% were three-point shots. How many three-point shots did the player make?

$$0.08 \cdot 75 = x$$

$$x = 6$$

17. A jacket with an original price of \$49.30 is discounted 30%. What is the sale price?

$$49.30 \cdot 0.7 = 34.51$$

18. After a discount of 40%, the sale price of a ride pass at a fun park is \$30. What is the original price?

$$30 = 0.6x$$

$$x = 50$$

19. Cost to store: \$90. Markup: 100%. Selling price: ?

$$90 + 90 = 180$$

20. Cost to store: \$30. Markup: 110%. Selling price: ?

$$30 + 33 = 63$$

21. A bike with an original price of \$90 is discounted 40%. What is the sale price?

$$90 \cdot 0.6 = 54$$

22. Find the annual interest rate.

$$I = prt$$

$$40 = 500 \cdot r \cdot 1.23$$

$$r = 0.057$$

23. Find the amount of time.

$$I = prt$$

$$30 = 100 \cdot 0.05 \cdot t$$

$$t = 6$$

24.  $I = $10, P = $100, r = 2%$

$$10 = 100 \cdot 0.02 \cdot t$$

$$t = 5 \text{ yrs}$$

25. A savings account earns 4% annual simple interest. The principal is \$100. What is the balance after 5 years?

$$I = 100 \cdot 0.04 \cdot 5 = 20$$

$$\text{Balance} = 100 + 20 = 120$$

26. \$1800 at 2% for 10 years

$$I = 1800 \cdot 0.02 \cdot 10 = 360$$

$$1800 + 360 = 2160$$

27. \$500 at 5% for 2 yrs

$$I = 500 \cdot 0.05 \cdot 2 = 50$$

$$500 + 50 = 550$$

Header: Name: \_\_\_\_\_

Table with multiple columns and rows of text, mostly illegible due to blurring and low resolution.

PDF

