

1. Faith wants to use the formula $C(f) = \frac{5}{9}(f - 32)$ to

convert degrees Fahrenheit, f , to degrees Celsius, $C(f)$.

If Faith calculated $C(68)$, what would her result be?

1. 20° Celsius

2. 20° Fahrenheit

3. 154° Celsius

4. 154° Fahrenheit

$$C(68) = \frac{5}{9}(68 - 32)$$

$$= \frac{5}{9}(36) = 5 \cdot 4 = 20$$

2. Carla bought a dress at a sale for 20% off the original price. The sale price of the dress was \$28.80.

Find the original price of the dress, in dollars.

1. \$23.04 2. \$5.76
3. \$34.65 4. \$36

$$\frac{.8P}{.8} = \frac{28.80}{.8} \quad P = 36$$

3. Rashawn bought a CD that cost \$18.99 and paid \$20.51, including sales tax. What was the rate of the sales tax?

1. 5% 2. 2%
3. 3% 4. 8%

$$\frac{X(18.99)}{18.99} = \frac{20.51}{18.99}$$

$$X = 1.08 \rightarrow \text{tax } \underline{8\%}$$

4. If 25% of a number is 12, find the number.

1. 24 2. 48

3. 3 4. 4

$$\frac{.25x}{.25} = \frac{12}{.25}$$

$$x = 48$$

5. Yesterday, the temperature was 80°F . Today, the high temperature was 75°F . What was the percent of change in the temperature?

1. 5%

2. 6.25%

3. 37.5%

4. 93.75%

$$\frac{75}{80} = .9375$$

↓

93.75%

↪ down by 6.25%

6. What is the product of $4 + 3i$ and $4 - 3i$?

1. 25 2. 16
3. 7 4. 5

$$i^2 = -1$$

$$\begin{aligned} & (4 + 3i)(4 - 3i) \\ &= 16 - \cancel{12i} + \cancel{12i} - 9i^2 \\ &= 16 + 9 = 25 \end{aligned}$$

7. The expression $(3 - 7i)^2$ is equivalent to:

1. $-40 + 0i$

2. $-40 - 42i$

3. $58 + 0i$

4. $58 - 42i$

$$(3 - 7i)(3 - 7i)$$

$$= 9 - 21i - 21i + 49i^2$$

$$= 9 - 42i - 49 = -40 - 42i$$