

Center #1 – Order the numbers from least to greatest.

1. $\frac{36}{45}$, 0.83, 81%

2. $\frac{9}{4}$, 220%, 2.152

3. 0.67, 66%, $\frac{2}{3}$

4. 0.88, $\frac{7}{8}$, 90%

Center #2 – Write and solve using a proportion or equation.

1. What percent of 60 is 18?

2. 40 is what percent of 32?

3. What number is 70% of 70?

4. 91 is 130% of what number?

Center #3 – Find the percent increase or decrease. Round to the nearest whole if necessary.

1. 27 to 36

2. 30 to 22

3. $\frac{2}{5}$ to 1

3. You estimate that a jar contains 68 marbles. It actually has 60 marbles. Find the percent error.

Center #4 – Find the sale price or original price.

- | | | | | | |
|----|----------------------|----|-------------------|----|-----------------------|
| 1. | Original price: \$50 | 2. | Original price: ? | 3. | Original price: \$125 |
| | Discount: 15% | | Discount: 20% | | Discount: ? |
| | Sale price: ? | | Sale price: \$75 | | Sale price: \$81.25 |

Center #5 – The account earns simple interest. Find the missing value.

- | | | | | | |
|----|---------------------|----|--------------------------|----|---------------------------|
| 1. | Interest earned: ? | 2. | Interest earned: \$13.75 | 3. | Interest earned: \$112.50 |
| | Principal: \$2000 | | Principal: ? | | Principal: \$1250 |
| | Interest Rate: 3.5% | | Interest rate: 5% | | Interest rate: ?% |
| | Time: 4 years | | Time: 6 months | | Time: 3 years |

Center #6

- 15% of the cars in the parking lot are blue. If there are 18 blue cars, how many total cars are in the parking lot?
- You deposit \$7850 in an account earning 2% simple interest. How long will it take for the balance of the account to be \$8085.50?
- A store buys a pair of jeans for \$30 and marks it up 35%. The following week it sells the jeans at a 25% discount. How much are the jeans after the discount?

Center #1 – Order the numbers from least to greatest.

1. $\frac{36}{45}, 0.83, 81\%$

\downarrow
81%

$\frac{36}{45}, 81\%, 0.83$

2. $\frac{9}{4}, 220\%, 2.152$

$\downarrow \quad \downarrow$
2.25 2.2

2.152, 220%, $\frac{9}{4}$

3. 0.67, 66%, $\frac{2}{3}$

\downarrow
0.6

66%, $\frac{2}{3}, 0.67$

4. 0.88, $\frac{7}{8}, 90\%$

\downarrow
0.875

$\frac{7}{8}, 0.88, 90\%$

Center #2 – Write and solve using a proportion or equation.

1. What percent of 60 is 18?

$x \cdot 60 = 18$

$18 \div 60 = 0.3$

30%

2. 40 is what percent of 32?

$40 = x \cdot 32$

$40 \div 32 = 1.25$

125%

3. What number is 70% of 70?

$n = 0.7 \cdot 70$

$n = 49$

4. 91 is 130% of what number?

$91 = 1.3 \cdot x$

$91 \div 1.3 = 70$

Center #3 – Find the percent increase or decrease. Round to the nearest whole if necessary.

1. 27 to 36

$36 - 27 = 9$

$\frac{9}{27} = 0.33$

33%

2. 30 to 22

$30 - 22 = 8$

$\frac{8}{30} = 0.266$

27%

3. $\frac{2}{5}$ to 1

$1 - \frac{2}{5} = \frac{3}{5}$

$\frac{3}{5} \div \frac{2}{5} \Rightarrow \frac{3}{5} \cdot \frac{5}{2} = \frac{3}{2} = 1\frac{1}{2}$

150%

3. You estimate that a jar contains 68 marbles. It actually has 60 marbles. Find the percent error.

$68 - 60 = 8$

$\frac{8}{60} = 0.13$

13%

17-20 all, 22a, 23

Center #4 – Find the sale price or original price.

1. Original price: \$50
Discount: 15%
Sale price: ?

$$50 \cdot 0.15 = 7.50$$

$$50 - 7.50 = \$42.50$$

2. Original price: ?
Discount: 20%
Sale price: \$75

$$0.8 \times p = 75$$

$$75 \div 0.8 = \$93.75$$

3. Original price: \$125
Discount: ?
Sale price: \$81.25

$$125 - 81.25 = 43.75$$

$$43.75 \div 125 = 0.35$$

$$35\%$$

Center #5 – The account earns simple interest. Find the missing value.

1. Interest earned: ?
Principal: \$2000
Interest Rate: 3.5%
Time: 4 years

$$2000 \times 0.035 = 70$$

$$70 \times 4 = \$280$$

2. Interest earned: \$13.75
Principal: ?
Interest rate: 5%
Time: 6 months

$$13.75 \times 2 = 27.50$$

$$0.05 \times p = 27.50$$

$$27.50 \div 0.05 = \$550$$

3. Interest earned: \$112.50
Principal: \$1250
Interest rate: ?%
Time: 3 years

$$112.50 \div 3 = 37.50$$

$$r \times 1250 = 37.50$$

$$37.50 \div 1250 = 0.03$$

$$3\%$$

Center #6

1. 15% of the cars in the parking lot are blue. If there are 18 blue cars, how many total cars are in the parking lot?

$$0.15 \times c = 18$$

$$18 \div 0.15 = 120 \text{ cars}$$

2. You deposit \$7850 in an account earning 2% simple interest. How long will it take for the balance of the account to be \$8085.50?

$$8085.50 - 7850 = 235.50 \text{ (total earned)}$$

$$7850 \times 0.02 = 157 \text{ (earned per year)}$$

$$235.5 \div 157 = 1.5 \text{ years}$$

3. A store buys a pair of jeans for \$30 and marks it up 35%. The following week it sells the jeans at a 25% discount. How much are the jeans after the discount?

$$30 \times 0.35 = 10.50$$

$$30 + 10.50 = 40.50$$

$$40.50 \times .25 = 10.13$$

$$40.50 - 10.13 = \$30.37$$