

Center #1 – Evaluate the expression.

1) $3 \times 6 - 12 \div 6$

2) $20 \times (3^3 - 4) \div 20$

3) $5 + (4^2 + 2) \div 6$

4) $12 + 4(16 \div 4)^2$

Center #2 – List the factor pairs for each number.

1) 28

2) 44

3) 63

Center #3 – Write the prime factorization of the number.

1) 42

2) 450

3) 1680

Center #4 – Find the lowest common multiple.

1) 4 and 14

2) 18 and 27

Center #5 – Find the greatest common factor.

1) 30 and 48

2) 32, 56, and 96

Center #6 – Add or subtract. Write the answer in simplest form.

1) $\frac{5}{9} + \frac{3}{8}$

2) $3\frac{5}{6} - 2\frac{7}{15}$

3) Find the greatest perfect square that is a factor of the number 650

Center #1 – Evaluate the expression.

1) $3 \times 6 - 12 \div 6$

$$18 - 2 = 16$$

2) $20 \times (3^3 - 4) \div 20$

$$\begin{aligned} & 20 \times (27 - 4) \div 20 \\ & 20 \times 23 \div 20 \\ & 460 \div 20 = 23 \end{aligned}$$

3) $5 + (4^2 + 2) \div 6$

$$5 + (16 + 2) \div 6$$

$$5 + 18 \div 6$$

$$5 + 3 = 8$$

4) $12 + 4(16 \div 4)^2$

$$12 + 4(4)^2$$

$$12 + 4(16)$$

$$12 + 64 = 76$$

Center #2 – List the factor pairs for each number.

1) 28 - 1, 2, 4, 7, 14, 28

2) 44 - 1, 2, 4, 11, 22, 44

3) 63 - 1, 3, 7, 9, 21, 63

Center #3 – Write the prime factorization of the number.

1) 42

$$\begin{array}{c} 2 \\ \swarrow \quad \nwarrow \\ 7 \quad 3 \end{array}$$

$$2 \cdot 3 \cdot 7$$

2) 450

$$\begin{array}{c} 45 \\ \swarrow \quad \nwarrow \\ 9 \quad 5 \\ \swarrow \quad \nwarrow \\ 3 \quad 3 \\ \swarrow \quad \nwarrow \\ 2 \quad 5 \end{array}$$

$$2 \cdot 3^2 \cdot 5^2$$

3) 1680

$$\begin{array}{c} 1680 \\ \swarrow \quad \nwarrow \\ 168 \quad 10 \\ \swarrow \quad \nwarrow \\ 84 \quad 2 \\ \swarrow \quad \nwarrow \\ 42 \quad 2 \\ \swarrow \quad \nwarrow \\ 21 \quad 2 \\ \swarrow \quad \nwarrow \\ 7 \quad 3 \end{array}$$

$$2^4 \cdot 3 \cdot 5 \cdot 7$$

Center #4 – Find the lowest common multiple.

1) 4 and 14

$4 \rightarrow 4, 8, 12, 16, 20, 24, 28$
 $14 \rightarrow 14, 28$

2) 18 and 27

$18 = 2 \cdot 3 \cdot 3$
 $27 = 3 \cdot 3 \cdot 3$
 $2 \cdot 3 \cdot 3 \cdot 3 = 54$

Center #5 – Find the greatest common factor.

1) 30 and 48

$30 = 1, 2, 3, 5, 6, 10, 15, 30$
 $48 = 1, 2, 3, 4, 6, 8, 12, 16, 24, 48$

2) 32, 56, and 96

$32 = 2 \cdot 2 \cdot 2 \cdot 2$
 $56 = 2 \cdot 2 \cdot 2 \cdot 7$
 $96 = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 3$
 $2 \cdot 2 \cdot 2 = 8$

Center #6 – Add or subtract. Write the answer in simplest form.

1) $\frac{5}{9} + \frac{3}{8}$

2) $3\frac{5}{6} - 2\frac{7}{15}$

$\frac{40}{72} + \frac{27}{72} = \frac{67}{72}$

$3\frac{25}{30} - 2\frac{14}{30} = 1\frac{11}{30}$

3) Find the greatest perfect square that is a factor of the number 650

$650 = 2 \cdot 5 \cdot 5 \cdot 13$
 $5 \cdot 5 = 25$