Math on the Fly!

NAME: _____ DATE: _____

Combining Ratios

Solve each problem below. Reduce ratio answers, if possible.

1. There are nickels, dimes, and quarters in a wallet.
The ratio of nickels to dimes is 1 to 4. The ratio of dimes to quarters is 4 to 3.
What is the ratio of nickels to quarters in the purse?

2. There are cars, vans, and trucks in a parking lot.
The ratio of cars to vans is 3 to 8. The ratio of trucks to cars in the lot is 6 to 3.
What is the ratio of trucks to vans in the lot ?

3. There are rings, bracelets and necklaces in a jewelry box.
The ratio of bracelets to rings is 1 to 2. The ratio of rings to necklaces is 4 to 7.
What is the ratio of bracelets to necklaces in the box?

4. A garden has tulips, roses, and daisies.
There are 8 tulips to every 5 roses. There are 15 roses to every 8 daisies.
What is the ratio of daisies to tulips in the garden?

5. There were pens, pencils and markers in a book bag.
The ratio of pens to pencils is 4 : 5. The ratio of markers to pencils is 9 : 5.
What is the ratio of markers to pens in the book bag?

6. An attic has old math, science and history books.
The ratio of math books to science books is 9 : 8. The ratio of math books to history books is 6 : 5. What is the ratio of science to history books in the attic?

7. Cameras, clocks and phones are being sold in a store.
The ratio of cameras to clocks is 12 : 7. The ratio of clocks to phones is 7 : 15.
What is the ratio of cameras to phones in the store?

8. A hotel bought bottles of orange, apple and grape juice.
The ratio of orange juice to apple juice was 10 : 3. The ratio of grape juice to orange juice was 7 : 6. What was the ratio of apple juice to grape juice?

SOLUTIONS

1. **1** : 4 (NICK : DIMES) 4 : **3** (DIMES : QUART) → **1 : 3** (NICK : QUART)

2. 3 : **8** (CARS : VANS) **6** : 3 (TRUCKS : CARS) → 6 : 8 (TRUCKS : VANS) reduce → **3 : 4** (TRUCKS : VANS)

3. 1 : 2 (+2, +2) = **2** : 4 (BRACE : RINGS) 4 : 7 = 4 : **7** (RINGS : NECK) → **2 : 7** (BRACE : NECK)

4. 8 : 5 (+3, +3) = **24** : 15 (TULIPS : ROSES) 15 : 8 = 15 : **8** (ROSES : DAISIES) → 8 : 24 (DAISIES : TULIPS)

= **1 : 3** (DAISIES : TULIPS)

5. **4** : 5 (PENS : PENCILS) **9** : 5 (MARK : PENCILS) → **9 : 4** (MARK : PENS)

6. 9 : 8 (+2, +2) = 18 : **16** (MATH : SCI) 6 : 5 (+3, +3) = 18 : **15** (MATH : HIST) → **16 : 15** (SCI : HIST)

7. **12** : 7 (CAMS : CLOCKS) 7 : **15** (CLOCKS : PHONES) → 12 : 15 (CAMS : PHONES) reduce → **4 : 5** (CAMS : PHONES)

8. 10 : 3 (+3, +3) = 30 : **9** (ORAN : APPLE) 7 : 6 (+5, +5) = **35** : 30 (GRAPE : ORAN) → **9 : 35** (APPLE : GRAPE)