Worded Problems Part 2

1) Mary mixed together 9 gal. of Brand A
   fruit drink and 6 gal. of Brand B fruit
   drink which contains 55% fruit juice.
   Find the percent of fruit juice in Brand A
   if the mixture contained 34% fruit juice.

   A) 30%   B) 15%   C) 20%   D) 5%

2) Arjun wants to make 15 fl. oz. of a 65%
   sugar solution by mixing together a 55%
   sugar solution and a 70% sugar solution.
   How much of each solution must he use?

   A) 3 fl. oz. of 55% solution, 12 fl. oz. of 70% solution
   B) 5 fl. oz. of 55% solution, 10 fl. oz. of 70% solution
   C) 6 fl. oz. of 55% solution, 9 fl. oz. of 70% solution
   D) 8 fl. oz. of 55% solution, 7 fl. oz. of 70% solution

3) 2 qt. of an acid solution was mixed with 4
   qt. of a 28% acid solution to make a 42%
   acid solution. Find the percent
   concentration of the first solution.

   A) 85%   B) 70%   C) 45%   D) 82%

4) How many oz of arabica coffee beans which cost $7/oz must be added to 7 oz of robusta coffee beans which cost $11/oz to make Shanice's Premium Coffee Blend which costs $9/oz?

   A) 4 ozs   B) 7 ozs   C) 5 ozs   D) 2 ozs

5) 2 fl. oz. of a saline solution was mixed with 10 fl. oz. of a 10% saline solution to make a 20% saline solution. Find the percent concentration of the first solution.

   A) 85%   B) 29%   C) 70%   D) 90%

6) How many kg of copper which costs $4/kg must be added to 3 kg of tin which costs $8/kg to make bronze which costs $5/kg?

   A) 8 kgs   B) 2 kgs   C) 9 kgs   D) 10 kgs

7) Farmer Gabriella's Produce Stand sells 25 lbs. bags of mixed nuts that contain 34% peanuts. To make her product she combines Brand A mixed nuts which contain 20% peanuts and Brand B mixed nuts which contain 70% peanuts. How much of each does she need to use?

A) 7 lbs. of Brand A, 18 lbs. of Brand B   B) 4 lbs. of Brand A, 21 lbs. of Brand B
C) 18 lbs. of Brand A, 7 lbs. of Brand B   D) 17 lbs. of Brand A, 8 lbs. of Brand B

8) What is the price per lb of arugula if 6 lb were mixed with 12 lb of spinach which costs $3/lb to make 18 lb of premium salad mix which costs $4/lb?

A) $10.50/lb   B) $6/lb   C) $8.10/lb   D) $4.98/lb

9) Imani mixed together 6 gal. of Brand A fruit drink and 9 gal. of Brand B fruit drink which contains 38% fruit juice. Find the percent of fruit juice in Brand A if the mixture contained 34% fruit juice.

A) 48%   B) 24%   C) 14%   D) 28%

10) Chelsea asked you to make 12 gal. of fruit punch that contains 20% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 10% fruit juice and Brand B contains 40% fruit juice. How much of each do you need?

A) 4 gal. of Brand A, 8 gal. of Brand B   B) 3 gal. of Brand A, 9 gal. of Brand B
C) 8 gal. of Brand A, 4 gal. of Brand B   D) 6 gal. of Brand A, 6 gal. of Brand B

11) Julia left the science museum and drove west at an average speed of 52 mph. Adam left one hour later and drove in the opposite direction with an average speed of 74 mph. How long does Adam need to drive before they are 556 mi. apart?

A) 1 hour   B) 3 hours   C) 7 hours   D) 4 hours

12) An aircraft carrier traveled to St. Vincent and back. The trip there took five hours and the trip back took nine hours. It averaged 10 km/h on the return trip. Find the average speed of the trip there.

A) 20 km/h   B) 30 km/h   C) 18 km/h   D) 25 km/h

13) Aliyah left school and traveled north. One hour later Sumalee left traveling at 75 mph in an effort to catch up to Aliyah. After traveling for two hours Sumalee finally caught up. Find Aliyah's average speed.

A) 50 mph   B) 45 mph   C) 20 mph   D) 35 mph

14) Danielle left school and drove south. Shanice left three hours later driving at 50 mph in an effort to catch up to Danielle. After driving for two hours Shanice finally caught up. Find Danielle's average speed.

A) 20 mph   B) 5 mph   C) 30 mph   D) 10 mph

15) Trevon left the hospital and drove toward the ferry office at an average speed of 40 mph. Sometime later Shanice left driving in the same direction but at an average speed of 48 mph. After driving for five hours Shanice caught up with Trevon. Find the number of hours Trevon drove before Shanice caught up.

A) 7 hours   B) 10 hours   C) 6 hours   D) 11 hours

16) A diesel train left Abuja and traveled toward the fueling station at an average speed of 90 mph. A cattle train left 12 hours later and traveled in the opposite direction with an average speed of 80 mph. How long does the cattle train need to travel before the trains are 1250 mi. apart?

   A) 1 hour   B) 2 hours   C) 3 hours   D) 5 hours

17) An aircraft carrier left Diego Garcia at the same time as a fishing boat. The vessels traveled in opposite directions. The fishing boat traveled at a speed of 30 mph. After nine hours they were 405 mi. apart. How fast did the aircraft carrier travel?

   A) 21 mph   B) 15 mph   C) 5 mph   D) 10 mph

18) A passenger plane flew to the maintenance facility and back. On the trip there it flew 245 km/h and on the return trip it went 385 km/h. How long did the trip there take if the return trip took seven hours?

   A) 14 hours   B) 8 hours   C) 13 hours   D) 11 hours

19) A jet left London and flew south. An Air Force plane left one hour later flying at 200 mph in an effort to catch up to the jet. After flying for seven hours the Air Force plane finally caught up. Find the jet's average speed.

A) 175 mph   B) 100 mph   C) 170 mph   D) 159 mph

20) Matt left the science museum and drove toward the ocean at an average speed of 54 mph. Sarawong left sometime later driving in the same direction at an average speed of 72 mph. After driving for three hours Sarawong caught up with Matt. Find the number of hours Matt drove before Sarawong caught up.

A) 4 hours   B) 7 hours   C) 8 hours   D) 6 hours

Solve each question. Round your answer to the nearest hundredth.

21) It takes Asanji 13 hours to pick forty bushels of apples. Imani can pick the same amount in 15 hours. If they worked together how long would it take them?

A) 8.38 hours   B) 6.66 hours   C) 6.96 hours   D) 5.36 hours

22) Working alone, it takes Mei ten hours to dig a 10 ft by 10 ft hole. Krystal can dig the same hole in nine hours. How long would it take them if they worked together?

A) 4.74 hours   B) 3.88 hours   C) 5.09 hours   D) 4.18 hours

23) It takes Huong 16 hours to clean an attic. Brenda can clean the same attic in 11 hours. Find how long it would take them if they worked together.

A) 8.39 hours   B) 6.97 hours   C) 6.52 hours   D) 8.04 hours

24) Working alone, Shawna can pick forty bushels of apples in 10 hours. One day her friend Arjun helped her and it only took 5.24 hours. How long would it take Arjun to do it alone?

A) 10.04 hours   B) 8.38 hours   C) 11.01 hours   D) 9.36 hours

25) It takes Willie nine hours to mop a warehouse. John can mop the same warehouse in eight hours. Find how long it would take them if they worked together.

   A) 4.92 hours   B) 4.24 hours   C) 4.94 hours   D) 3.48 hours

26) It takes Pranav ten hours to pick forty bushels of apples. Ted can pick the same amount in 14 hours. If they worked together how long would it take them?

   A) 5.83 hours   B) 7.21 hours   C) 6.61 hours   D) 6.85 hours

27) Working together, Julio and Lea can clean an attic in 5.22 hours. Had she done it alone it would have taken Lea 8 hours. Find how long it would take Julio to do it alone.

   A) 13.41 hours   B) 13.34 hours   C) 15 hours   D) 15.02 hours

28) Willie can install a new deck in 14 hours. One day his friend John helped him and it only took 7.47 hours. Find how long it would take John to do it alone.

   A) 16.02 hours　　　B) 20.57 hours　　　C) 16.46 hours　　　D) 11.75 hours

29) It takes Willie 15 hours to tar a roof. Ashley can tar the same roof in 9 hours. How long would it take them if they worked together?

   A) 4.78 hours　　　B) 4.59 hours　　　C) 5.63 hours　　　D) 6.63 hours

30) Ted can sweep a porch in 14 minutes. One day his friend Norachai helped him and it only took 7.24 minutes. Find how long it would take Norachai to do it alone.

   A) 11.05 minutes　　　B) 14.3 minutes　　　C) 19.45 minutes　　　D) 14.99 minutes

Worded Problems Part 2

1) Mary mixed together 9 gal. of Brand A
   fruit drink and 6 gal. of Brand B fruit
   drink which contains 55% fruit juice.
   Find the percent of fruit juice in Brand A
   if the mixture contained 34% fruit juice.

   A) 30%   B) 15%   *C) 20%   D) 5%

2) Arjun wants to make 15 fl. oz. of a 65%
   sugar solution by mixing together a 55%
   sugar solution and a 70% sugar solution.
   How much of each solution must he use?

   A) 3 fl. oz. of 55% solution, 12 fl. oz. of 70% solution
  *B) 5 fl. oz. of 55% solution, 10 fl. oz. of 70% solution
   C) 6 fl. oz. of 55% solution, 9 fl. oz. of 70% solution
   D) 8 fl. oz. of 55% solution, 7 fl. oz. of 70% solution

3) 2 qt. of an acid solution was mixed with 4
   qt. of a 28% acid solution to make a 42%
   acid solution. Find the percent
   concentration of the first solution.

   A) 85%   *B) 70%   C) 45%   D) 82%

4) How many oz of arabica coffee beans which cost $7/oz must be added to 7 oz of robusta coffee beans which cost $11/oz to make Shanice's Premium Coffee Blend which costs $9/oz?

A) 4 ozs   *B) 7 ozs   C) 5 ozs   D) 2 ozs

5) 2 fl. oz. of a saline solution was mixed with 10 fl. oz. of a 10% saline solution to make a 20% saline solution. Find the percent concentration of the first solution.

A) 85%   B) 29%   *C) 70%   D) 90%

6) How many kg of copper which costs $4/kg must be added to 3 kg of tin which costs $8/kg to make bronze which costs $5/kg?

A) 8 kgs   B) 2 kgs   *C) 9 kgs   D) 10 kgs

7) Farmer Gabriella's Produce Stand sells 25 lbs. bags of mixed nuts that contain 34% peanuts. To make her product she combines Brand A mixed nuts which contain 20% peanuts and Brand B mixed nuts which contain 70% peanuts. How much of each does she need to use?

A) 7 lbs. of Brand A, 18 lbs. of Brand B
B) 4 lbs. of Brand A, 21 lbs. of Brand B
*C) 18 lbs. of Brand A, 7 lbs. of Brand B
D) 17 lbs. of Brand A, 8 lbs. of Brand B

8) What is the price per lb of arugula if 6 lb were mixed with 12 lb of spinach which costs $3/lb to make 18 lb of premium salad mix which costs $4/lb?

A) $10.50/lb   *B) $6/lb   C) $8.10/lb   D) $4.98/lb

9) Imani mixed together 6 gal. of Brand A fruit drink and 9 gal. of Brand B fruit drink which contains 38% fruit juice. Find the percent of fruit juice in Brand A if the mixture contained 34% fruit juice.

A) 48%   B) 24%   C) 14%   *D) 28%

10) Chelsea asked you to make 12 gal. of fruit
punch that contains 20% fruit juice by
mixing together some amount of Brand A
fruit punch and some amount of Brand B
fruit punch. Brand A contains 10% fruit
juice and Brand B contains 40% fruit
juice. How much of each do you need?

A) 4 gal. of Brand A, 8 gal. of Brand B   B) 3 gal. of Brand A, 9 gal. of Brand B
*C) 8 gal. of Brand A, 4 gal. of Brand B   D) 6 gal. of Brand A, 6 gal. of Brand B

11) Julia left the science museum and drove
west at an average speed of 52 mph.
Adam left one hour later and drove in the
opposite direction with an average speed
of 74 mph. How long does Adam need to
drive before they are 556 mi. apart?

A) 1 hour   B) 3 hours   C) 7 hours   *D) 4 hours

12) An aircraft carrier traveled to St. Vincent
and back. The trip there took five hours
and the trip back took nine hours. It
averaged 10 km/h on the return trip. Find
the average speed of the trip there.

A) 20 km/h   B) 30 km/h   *C) 18 km/h   D) 25 km/h

13) Aliyah left school and traveled north. One hour later Sumalee left traveling at 75 mph in an effort to catch up to Aliyah. After traveling for two hours Sumalee finally caught up. Find Aliyah's average speed.

  *A) 50 mph   B) 45 mph   C) 20 mph   D) 35 mph

14) Danielle left school and drove south. Shanice left three hours later driving at 50 mph in an effort to catch up to Danielle. After driving for two hours Shanice finally caught up. Find Danielle's average speed.

  *A) 20 mph   B) 5 mph   C) 30 mph   D) 10 mph

15) Trevon left the hospital and drove toward the ferry office at an average speed of 40 mph. Sometime later Shanice left driving in the same direction but at an average speed of 48 mph. After driving for five hours Shanice caught up with Trevon. Find the number of hours Trevon drove before Shanice caught up.

  A) 7 hours   B) 10 hours   *C) 6 hours   D) 11 hours

16) A diesel train left Abuja and traveled toward the fueling station at an average speed of 90 mph. A cattle train left 12 hours later and traveled in the opposite direction with an average speed of 80 mph. How long does the cattle train need to travel before the trains are 1250 mi. apart?

 *A) 1 hour   B) 2 hours   C) 3 hours   D) 5 hours

17) An aircraft carrier left Diego Garcia at the same time as a fishing boat. The vessels traveled in opposite directions. The fishing boat traveled at a speed of 30 mph. After nine hours they were 405 mi. apart. How fast did the aircraft carrier travel?

  A) 21 mph   *B) 15 mph   C) 5 mph   D) 10 mph

18) A passenger plane flew to the maintenance facility and back. On the trip there it flew 245 km/h and on the return trip it went 385 km/h. How long did the trip there take if the return trip took seven hours?

  A) 14 hours   B) 8 hours   C) 13 hours   *D) 11 hours

19) A jet left London and flew south. An Air Force plane left one hour later flying at 200 mph in an effort to catch up to the jet. After flying for seven hours the Air Force plane finally caught up. Find the jet's average speed.

*A) 175 mph   B) 100 mph   C) 170 mph   D) 159 mph

20) Matt left the science museum and drove toward the ocean at an average speed of 54 mph. Sarawong left sometime later driving in the same direction at an average speed of 72 mph. After driving for three hours Sarawong caught up with Matt. Find the number of hours Matt drove before Sarawong caught up.

*A) 4 hours   B) 7 hours   C) 8 hours   D) 6 hours

Solve each question. Round your answer to the nearest hundredth.

21) It takes Asanji 13 hours to pick forty bushels of apples. Imani can pick the same amount in 15 hours. If they worked together how long would it take them?

A) 8.38 hours   B) 6.66 hours   *C) 6.96 hours   D) 5.36 hours

22) Working alone, it takes Mei ten hours to dig a 10 ft by 10 ft hole. Krystal can dig the same hole in nine hours. How long would it take them if they worked together?

 *A) 4.74 hours   B) 3.88 hours   C) 5.09 hours   D) 4.18 hours

23) It takes Huong 16 hours to clean an attic. Brenda can clean the same attic in 11 hours. Find how long it would take them if they worked together.

  A) 8.39 hours   B) 6.97 hours   *C) 6.52 hours   D) 8.04 hours

24) Working alone, Shawna can pick forty bushels of apples in 10 hours. One day her friend Arjun helped her and it only took 5.24 hours. How long would it take Arjun to do it alone?

  A) 10.04 hours   B) 8.38 hours   *C) 11.01 hours   D) 9.36 hours

25) It takes Willie nine hours to mop a warehouse. John can mop the same warehouse in eight hours. Find how long it would take them if they worked together.

  A) 4.92 hours   *B) 4.24 hours   C) 4.94 hours   D) 3.48 hours

26) It takes Pranav ten hours to pick forty bushels of apples. Ted can pick the same amount in 14 hours. If they worked together how long would it take them?

  *A) 5.83 hours   B) 7.21 hours   C) 6.61 hours   D) 6.85 hours

27) Working together, Julio and Lea can clean an attic in 5.22 hours. Had she done it alone it would have taken Lea 8 hours. Find how long it would take Julio to do it alone.

  A) 13.41 hours   B) 13.34 hours   C) 15 hours   *D) 15.02 hours

28) Willie can install a new deck in 14 hours. One day his friend John helped him and it only took 7.47 hours. Find how long it would take John to do it alone.

   *A) 16.02 hours B) 20.57 hours C) 16.46 hours D) 11.75 hours

29) It takes Willie 15 hours to tar a roof. Ashley can tar the same roof in 9 hours. How long would it take them if they worked together?

   A) 4.78 hours B) 4.59 hours *C) 5.63 hours D) 6.63 hours

30) Ted can sweep a porch in 14 minutes. One day his friend Norachai helped him and it only took 7.24 minutes. Find how long it would take Norachai to do it alone.

   A) 11.05 minutes B) 14.3 minutes C) 19.45 minutes *D) 14.99 minutes