Name_____

Assignment

Date_____ Period____

1) Julio wants to make 7.5 qt. of a 22% saline solution by mixing together a 25% saline solution and a 20% saline solution. How much of each solution must he use?

2) To build the garden of your dreams you need 8 ft³ of soil containing 45% silt. You have two types of soil you can combine to achieve this: soil with 12% silt and pure silt. How much of each soil should you use?

3) A metallurgist needs to make 11 kg of an alloy containing 46% gold. She is going to melt and combine one metal that is 10% gold with another metal that is 70% gold. How much of each should she use?

4) Farmer Emily's Produce Stand sells 14.4 lbs. bags of mixed nuts that contain 35% peanuts. To make her product she combines Brand A mixed nuts which contain 60% peanuts and Brand B mixed nuts which contain 15% peanuts. How much of each does she need to use?

5) Ashley wants to make 12 gal. of a 52% saline solution by mixing together a 85% saline solution and a 30% saline solution. How much of each solution must she use?

6) To build the garden of your dreams you need 14 ft³ of soil containing 62% silt. You have two types of soil you can combine to achieve this: soil with 30% silt and pure silt. How much of each soil should you use?

7) Daniel's Red Hot Peanuts which cost $2.38/oz are made by combining peanuts which cost $1.70/oz with spices which cost $2.72/oz. Find the number of oz of peanuts and spices required to make 6 oz of Daniel's Red Hot Peanuts.

8) Fruit salad which costs $2.50/kg is made by combining sliced peaches which cost $3.40/kg with sliced bananas which cost $2/kg. Find the number of kg of sliced peaches and sliced bananas required to make 2.8 kg of fruit salad.

9) Carlos wants to make 13 ml of a 78% acid solution by mixing together a 70% acid solution and a 90% acid solution. How much of each solution must he use?

10) Micaela wants to make 11.5 gal. of a 56% sugar solution by mixing together a 34% sugar solution and a 80% sugar solution. How much of each solution must she use?

11) Trevon sells 23.5 kg bags of mixed nuts that contain 72% peanuts. To make his product he adds peanuts to Brand A's mixed nuts which contain 30% peanuts. How much of each does he combine?

12) To build the garden of your dreams you need 8 yd³ of soil containing 20% sand. You have two types of soil you can combine to achieve this: soil with 15% sand and soil with 25% sand. How much of each soil should you use?

13) Kathryn asked you to make 11.7 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?

14) Arjun asked you to make 15 L of fruit punch that contains 35% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 30% fruit juice and Brand B contains 45% fruit juice. How much of each do you need?

15) Anjali wants to make 7.5 qt. of a 26% acid solution by mixing together a 60% acid solution and a 10% acid solution. How much of each solution must she use?

16) A metallurgist needs to make 5.6 oz. of an alloy containing 55% nickel. She is going to melt and combine one metal that is 40% nickel with pure nickel. How much of each should she use?

17) A metallurgist needs to make 16 kg of an alloy containing 94% iron. He is going to melt and combine one metal that is 85% iron with pure iron. How much of each should he use?

18) A metallurgist needs to make 5.5 mg of an alloy containing 36% gold. She is going to melt and combine one metal that is 20% gold with another metal that is 60% gold. How much of each should she use?

19) Wilbur wants to make 8 fl. oz. of a 76% saline solution by mixing together a 46% saline solution and a 78% saline solution. How much of each solution must he use?

20) A metallurgist needs to make 3.9 lb. of an alloy containing 40% iron. She is going to melt and combine one metal that is 20% iron with another metal that is 50% iron. How much of each should she use?

21) To build the garden of your dreams you need 10 m³ of soil containing 30% silt. You have two types of soil you can combine to achieve this: soil with 38% silt and soil with 28% silt. How much of each soil should you use?

22) Premium salad mix which costs $2.69/oz is made by combining arugula which costs $2.58/oz with spinach which costs $3.24/oz. Find the number of oz of arugula and spinach required to make 3 oz of premium salad mix.

23) Fruit salad which costs $2.45/kg is made by combining sliced peaches which cost $2/kg with sliced bananas which cost $3.10/kg. Find the number of kg of sliced peaches and sliced bananas required to make 19.8 kg of fruit salad.

24) Shawna's Red Hot Peanuts which cost $2.80/oz are made by combining peanuts which cost $1/oz with spices which cost $4/oz. Find the number of oz of peanuts and spices required to make 2.5 oz of Shawna's Red Hot Peanuts.

Answers to Assignment (ID: 1)

1) 3 qt. of 25% solution, 4.5 qt. of 20% solution

2) 5 ft³ with 12% silt, 3 ft³ of silt

3) 4.4 kg of 10% gold, 6.6 kg of 70% gold

4) 6.4 lbs. of Brand A, 8 lbs. of Brand B

5) 4.8 gal. of 85% solution, 7.2 gal. of 30% solution

6) 7.6 ft³ with 30% silt, 6.4 ft³ of silt

7) 2 oz of peanuts, 4 oz of spices   8) 1 kg of sliced peaches, 1.8 kg of sliced bananas

9) 7.8 ml of 70% solution, 5.2 ml of 90% solution

10) 6 gal. of 34% solution, 5.5 gal. of 80% solution

11) 9.4 kg of Brand A, 14.1 kg of peanuts

12) 4 yd³ with 15% sand, 4 yd³ with 25% sand

13) 7.8 gal. of Brand A, 3.9 gal. of Brand B

14) 10 L of Brand A, 5 L of Brand B

15) 2.4 qt. of 60% solution, 5.1 qt. of 10% solution

16) 4.2 oz. of 40% nickel, 1.4 oz. of pure nickel

17) 6.4 kg of 85% iron, 9.6 kg of pure iron

18) 3.3 mg of 20% gold, 2.2 mg of 60% gold

19) 0.5 fl. oz. of 46% solution, 7.5 fl. oz. of 78% solution

20) 1.3 lb. of 20% iron, 2.6 lb. of 50% iron

21) 2 m³ with 38% silt, 8 m³ with 28% silt

22) 2.5 oz of arugula, 0.5 oz of spinach

23) 11.7 kg of sliced peaches, 8.1 kg of sliced bananas

24) 1 oz of peanuts, 1.5 oz of spices

Name_____

Assignment

Date_____ Period____

1) To build the garden of your dreams you need 4.5 ft³ of soil containing 54% sand. You have two types of soil you can combine to achieve this: soil with 56% sand and soil with 50% sand. How much of each soil should you use?

2) Vegetable oil which costs $2.80/lb is made by combining soybean oil which costs $2.60/lb with canola oil which costs $3.10/lb. Find the number of lb of soybean oil and canola oil required to make 21.5 lb of vegetable oil.

3) Farmer Joe's Produce Stand sells 30 oz. bags of mixed nuts that contain 41% peanuts. To make his product he combines Brand A mixed nuts which contain 20% peanuts and Brand B mixed nuts which contain 55% peanuts. How much of each does he need to use?

4) Farmer Mei's Produce Stand sells 10 oz. bags of mixed nuts that contain 46% peanuts. To make her product she combines Brand A mixed nuts which contain 30% peanuts and Brand B mixed nuts which contain 70% peanuts. How much of each does she need to use?

5) To build the garden of your dreams you need 8 ft³ of soil containing 33% clay. You have two types of soil you can combine to achieve this: soil with 45% clay and soil with 30% clay. How much of each soil should you use?

6) A metallurgist needs to make 10.5 oz. of an alloy containing 50% copper. He is going to melt and combine one metal that is 70% copper with another metal that is 40% copper. How much of each should he use?

7) Farmer Gabriella's Produce Stand sells 27 oz. bags of mixed nuts that contain 30% peanuts. To make her product she combines Brand A mixed nuts which contain 50% peanuts and Brand B mixed nuts which contain 20% peanuts. How much of each does she need to use?

8) Kayla asked you to make 16 gal. of fruit punch that contains 39% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 52% fruit juice and Brand B contains 20% fruit juice. How much of each do you need?

9) A metallurgist needs to make 10.8 oz. of an alloy containing 70% silver. She is going to melt and combine one metal that is 10% silver with pure silver. How much of each should she use?

10) Scott sells 22.5 kg bags of mixed nuts that contain 36% peanuts. To make his product he adds peanuts to Brand A's mixed nuts which contain 20% peanuts. How much of each does he combine?

11) A metallurgist needs to make 4.5 lb. of an alloy containing 18% silver. He is going to melt and combine one metal that is 10% silver with another metal that is 50% silver. How much of each should he use?

12) A metallurgist needs to make 3.9 kg of an alloy containing 60% iron. She is going to melt and combine one metal that is 80% iron with another metal that is 15% iron. How much of each should she use?

13) A metallurgist needs to make 1.5 oz. of an alloy containing 70% gold. He is going to melt and combine one metal that is 10% gold with pure gold. How much of each should he use?

14) Darryl wants to make 4.5 L of a 40% sugar solution by mixing together a 70% sugar solution and a 20% sugar solution. How much of each solution must he use?

15) Mixed nuts which cost $6.40/oz are made by combining walnuts which cost $9.65/oz with peanuts which cost $4.70/oz. Find the number of oz of walnuts and peanuts required to make 9.9 oz of mixed nuts.

16) Brand X sells 12 oz. bags of mixed nuts that contain 40% peanuts. To make their product they combine Brand A mixed nuts which contain 20% peanuts and Brand B mixed nuts which contain 50% peanuts. How much of each do they need to use?

17) Shreya asked you to make 13.5 gal. of fruit punch that contains 74% fruit juice by mixing together some Sweet Tropical Fruit Punch and some grape juice. How much of each ingredient do you need if the Sweet Tropical Fruit Punch contains 46% juice?

18) Abhasra wants to make 7.5 gal. of a 18% alcohol solution by mixing together a 90% alcohol solution and pure water. How much of each solution must she use?

19) A metallurgist needs to make 12 lb. of an alloy containing 52% silver. He is going to melt and combine one metal that is 50% silver with another metal that is 90% silver. How much of each should he use?

20) Mike wants to make 2 L of a 30% sugar solution by mixing together a 50% sugar solution and pure water. How much of each solution must he use?

21) To build the garden of your dreams you need 1.8 m³ of soil containing 30% clay. You have two types of soil you can combine to achieve this: soil with 50% clay and soil with 20% clay. How much of each soil should you use?

22) Brand X sells 24 lbs. bags of mixed nuts that contain 91% peanuts. To make their product they add peanuts to Brand A's mixed nuts which contain 55% peanuts. How much of each do they combine?

23) Brand X sells 19.5 oz. bags of mixed nuts that contain 84% peanuts. To make their product they add peanuts to Brand A's mixed nuts which contain 40% peanuts. How much of each do they combine?

24) A metallurgist needs to make 16 mg of an alloy containing 26% gold. She is going to melt and combine one metal that is 35% gold with another metal that is 20% gold. How much of each should she use?

Answers to Assignment (ID: 2)

1) 3 ft³ with 56% sand, 1.5 ft³ with 50% sand
2) 12.9 lb of soybean oil, 8.6 lb of canola oil
3) 12 oz. of Brand A, 18 oz. of Brand B
4) 6 oz. of Brand A, 4 oz. of Brand B
5) 1.6 ft³ with 45% clay, 6.4 ft³ with 30% clay
6) 3.5 oz. of 70% copper, 7 oz. of 40% copper
7) 9 oz. of Brand A, 18 oz. of Brand B
8) 9.5 gal. of Brand A, 6.5 gal. of Brand B
9) 3.6 oz. of 10% silver, 7.2 oz. of pure silver
10) 18 kg of Brand A, 4.5 kg of peanuts
11) 3.6 lb. of 10% silver, 0.9 lb. of 50% silver
12) 2.7 kg of 80% iron, 1.2 kg of 15% iron
13) 0.5 oz. of 10% gold, 1 oz. of pure gold
14) 1.8 L of 70% solution, 2.7 L of 20% solution
15) 3.4 oz of walnuts, 6.5 oz of peanuts
16) 4 oz. of Brand A, 8 oz. of Brand B
17) 6.5 gal. fruit punch, 7 gal. grape juice
18) 1.5 gal. of 90% solution, 6 gal. of pure water
19) 11.4 lb. of 50% silver, 0.6 lb. of 90% silver
20) 1.2 L of 50% solution, 0.8 L of pure water
21) 0.6 m³ with 50% clay, 1.2 m³ with 20% clay
22) 4.8 lbs. of Brand A, 19.2 lbs. of peanuts
23) 5.2 oz. of Brand A, 14.3 oz. of peanuts
24) 6.4 mg of 35% gold, 9.6 mg of 20% gold

Name_____

Assignment

Date_____ Period_____

1) Brand X sells 22.5 kg bags of mixed nuts that contain 38% peanuts. To make their product they combine Brand A mixed nuts which contain 25% peanuts and Brand B mixed nuts which contain 70% peanuts. How much of each do they need to use?

2) A metallurgist needs to make 3 kg of an alloy containing 78% gold. She is going to melt and combine one metal that is 70% gold with pure gold. How much of each should she use?

3) Brand X sells 33 oz. bags of mixed nuts that contain 60% peanuts. To make their product they add peanuts to Brand A's mixed nuts which contain 25% peanuts. How much of each do they combine?

4) A metallurgist needs to make 19.6 oz. of an alloy containing 60% gold. He is going to melt and combine one metal that is 30% gold with pure gold. How much of each should he use?

5) Kim wants to make 13.5 L of a 14% alcohol solution by mixing together a 10% alcohol solution and a 30% alcohol solution. How much of each solution must she use?

6) Jose asked you to make 13.4 gal. of fruit punch that contains 50% fruit juice by mixing together some Sweet Tropical Fruit Punch and some apple juice. How much of each ingredient do you need if the Sweet Tropical Fruit Punch contains 33% juice?

7) To build the garden of your dreams you need 5 yd³ of soil containing 44% clay. You have two types of soil you can combine to achieve this: soil with 20% clay and pure clay. How much of each soil should you use?

8) A metallurgist needs to make 11 kg of an alloy containing 26% nickel. He is going to melt and combine one metal that is 40% nickel with another metal that is 20% nickel. How much of each should he use?

9) Jasmine wants to make 7.6 gal. of a 30% acid solution by mixing together a 55% acid solution and a 5% acid solution. How much of each solution must she use?

10) Amanda asked you to make 11.7 L of fruit punch that contains 40% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 50% fruit juice and Brand B contains 20% fruit juice. How much of each do you need?

11) Brand X sells 15.4 kg bags of mixed nuts that contain 50% peanuts. To make their product they combine Brand A mixed nuts which contain 70% peanuts and Brand B mixed nuts which contain 30% peanuts. How much of each do they need to use?

12) A metallurgist needs to make 4.5 oz. of an alloy containing 38% nickel. She is going to melt and combine one metal that is 40% nickel with another metal that is 30% nickel. How much of each should she use?

13) Castel wants to make 2.4 gal. of a 20% acid solution by mixing together a 40% acid solution and a 10% acid solution. How much of each solution must he use?

14) A metallurgist needs to make 20 kg of an alloy containing 19% silver. He is going to melt and combine one metal that is 10% silver with another metal that is 30% silver. How much of each should he use?

15) A metallurgist needs to make 11 mg of an alloy containing 61% iron. He is going to melt and combine one metal that is 45% iron with pure iron. How much of each should he use?

16) A metallurgist needs to make 7 oz. of an alloy containing 43% platinum. He is going to melt and combine one metal that is 5% platinum with pure platinum. How much of each should he use?

17) To build the garden of your dreams you need 16 ft³ of soil containing 68% sand. You have two types of soil you can combine to achieve this: soil with 20% sand and pure sand. How much of each soil should you use?

18) Brand X sells 25 kg bags of mixed nuts that contain 23% peanuts. To make their product they combine Brand A mixed nuts which contain 30% peanuts and Brand B mixed nuts which contain 20% peanuts. How much of each do they need to use?

19) Kali sells 12 kg bags of mixed nuts that contain 80% peanuts. To make her product she adds peanuts to Brand A's mixed nuts which contain 50% peanuts. How much of each does she combine?

20) Pranav's Red Hot Peanuts which cost $2.06/oz are made by combining peanuts which cost $3.20/oz with spices which cost $1.94/oz. Find the number of oz of peanuts and spices required to make 10.5 oz of Pranav's Red Hot Peanuts.

21) Norachai sells 33 lbs. bags of mixed nuts that contain 66% peanuts. To make his product he adds peanuts to Brand A's mixed nuts which contain 40% peanuts. How much of each does he combine?

22) To build the garden of your dreams you need 15.5 yd³ of soil containing 30% clay. You have two types of soil you can combine to achieve this: soil with 15% clay and soil with 40% clay. How much of each soil should you use?

23) Matt wants to make 16.8 fl. oz. of a 15% saline solution by mixing together a 42% saline solution and pure water. How much of each solution must he use?

24) Mary asked you to make 11 L of fruit punch that contains 40% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 50% fruit juice and Brand B contains 25% fruit juice. How much of each do you need?

Answers to Assignment (ID: 3)

1) 16 kg of Brand A, 6.5 kg of Brand B
2) 2.2 kg of 70% gold, 0.8 kg of pure gold
3) 17.6 oz. of Brand A, 15.4 oz. of peanuts
4) 11.2 oz. of 30% gold, 8.4 oz. of pure gold
5) 10.8 L of 10% solution, 2.7 L of 30% solution
6) 10 gal. fruit punch, 3.4 gal. apple juice
7) 3.5 yd³ with 20% clay, 1.5 yd³ of clay
8) 3.3 kg of 40% nickel, 7.7 kg of 20% nickel
9) 3.8 gal. of 55% solution, 3.8 gal. of 5% solution
10) 7.8 L of Brand A, 3.9 L of Brand B
11) 7.7 kg of Brand A, 7.7 kg of Brand B
12) 3.6 oz. of 40% nickel, 0.9 oz. of 30% nickel
13) 0.8 gal. of 40% solution, 1.6 gal. of 10% solution
14) 11 kg of 10% silver, 9 kg of 30% silver
15) 7.8 mg of 45% iron, 3.2 mg of pure iron
16) 4.2 oz. of 5% platinum, 2.8 oz. of pure platinum
17) 6.4 ft³ with 20% sand, 9.6 ft³ of sand
18) 7.5 kg of Brand A, 17.5 kg of Brand B
19) 4.8 kg of Brand A, 7.2 kg of peanuts
20) 1 oz of peanuts, 9.5 oz of spices
21) 18.7 lbs. of Brand A, 14.3 lbs. of peanuts
22) 6.2 yd³ with 15% clay, 9.3 yd³ with 40% clay
23) 6 fl. oz. of 42% solution, 10.8 fl. oz. of pure water
24) 6.6 L of Brand A, 4.4 L of Brand B

Name_____

Assignment

Date_____ Period____

1) Jennifer wants to make 1.8 qt. of a 55% acid solution by mixing together a 50% acid solution and a 65% acid solution. How much of each solution must she use?

2) Beth wants to make 21 gal. of a 37% sugar solution by mixing together a 70% sugar solution and pure water. How much of each solution must she use?

3) To build the garden of your dreams you need 4 m³ of soil containing 22% silt. You have two types of soil you can combine to achieve this: soil with 25% silt and soil with 15% silt. How much of each soil should you use?

4) A metallurgist needs to make 5.5 kg of an alloy containing 44% nickel. He is going to melt and combine one metal that is 12% nickel with pure nickel. How much of each should he use?

5) Perry wants to make 4 ml of a 43% sugar solution by mixing together a 30% sugar solution and a 50% sugar solution. How much of each solution must he use?

6) Jack's Premium Molasses which costs $2.42/oz is made by combining cane molasses which costs $1.30/oz with beet molasses which costs $2.70/oz. Find the number of oz of cane molasses and beet molasses required to make 4 oz of Jack's Premium Molasses.

7) Brand X sells 14.7 kg bags of mixed nuts that contain 40% peanuts. To make their product they combine Brand A mixed nuts which contain 20% peanuts and Brand B mixed nuts which contain 62% peanuts. How much of each do they need to use?

8) Julio wants to make 11 qt. of a 39% alcohol solution by mixing together a 5% alcohol solution and a 60% alcohol solution. How much of each solution must he use?

9) To build the garden of your dreams you need 13 ft³ of soil containing 24% clay. You have two types of soil you can combine to achieve this: soil with 30% clay and soil with 20% clay. How much of each soil should you use?

10) Lea wants to make 9 fl. oz. of a 38% alcohol solution by mixing together a 10% alcohol solution and a 40% alcohol solution. How much of each solution must she use?

11) Emily wants to make 8 ml of a 37% alcohol solution by mixing together a 70% alcohol solution and a 10% alcohol solution. How much of each solution must she use?

12) To build the garden of your dreams you need 14 m³ of soil containing 16% clay. You have two types of soil you can combine to achieve this: soil with 30% clay and soil with 10% clay. How much of each soil should you use?

13) Farmer Chelsea's Produce Stand sells 26.5 kg bags of mixed nuts that contain 26% peanuts. To make her product she combines Brand A mixed nuts which contain 20% peanuts and Brand B mixed nuts which contain 30% peanuts. How much of each does she need to use?

14) To build the garden of your dreams you need 9.9 ft³ of soil containing 20% silt. You have two types of soil you can combine to achieve this: soil with 15% silt and soil with 30% silt. How much of each soil should you use?

15) To build the garden of your dreams you need 8 m³ of soil containing 31% clay. You have two types of soil you can combine to achieve this: soil with 25% clay and soil with 45% clay. How much of each soil should you use?

16) A metallurgist needs to make 12 oz. of an alloy containing 29% platinum. He is going to melt and combine one metal that is 28% platinum with another metal that is 34% platinum. How much of each should he use?

17) Premium salad mix which costs $5.35/lb is made by combining arugula which costs $5.90/lb with spinach which costs $5/lb. Find the number of lb of arugula and spinach required to make 18 lb of premium salad mix.

18) Trevon's Premium Coffee Blend which costs $4.55/lb is made by combining arabica coffee beans which cost $12.20/lb with robusta coffee beans which cost $4.10/lb. Find the number of lb of arabica coffee beans and robusta coffee beans required to make 10.8 lb of Trevon's Premium Coffee Blend.

19) Imani wants to make 1.5 fl. oz. of a 70% sugar solution by mixing together a 60% sugar solution and a 90% sugar solution. How much of each solution must she use?

20) Brand X sells 33 kg bags of mixed nuts that contain 27% peanuts. To make their product they combine Brand A mixed nuts which contain 25% peanuts and Brand B mixed nuts which contain 30% peanuts. How much of each do they need to use?

21) Arjun wants to make 3.2 gal. of a 75% acid solution by mixing together a 90% acid solution and a 30% acid solution. How much of each solution must he use?

22) Farmer Anjali's Produce Stand sells 26 kg bags of mixed nuts that contain 53% peanuts. To make her product she combines Brand A mixed nuts which contain 40% peanuts and Brand B mixed nuts which contain 60% peanuts. How much of each does she need to use?

23) Sumalee wants to make 6.4 fl. oz. of a 20% saline solution by mixing together a 80% saline solution and pure water. How much of each solution must she use?

24) Totsakan wants to make 10.2 fl. oz. of a 15% saline solution by mixing together a 34% saline solution and pure water. How much of each solution must he use?

Answers to Assignment (ID: 4)

1) 1.2 qt. of 50% solution, 0.6 qt. of 65% solution

2) 11.1 gal. of 70% solution, 9.9 gal. of pure water

3) 2.8 m³ with 25% silt, 1.2 m³ with 15% silt

4) 3.5 kg of 12% nickel, 2 kg of pure nickel

5) 1.4 ml of 30% solution, 2.6 ml of 50% solution

6) 0.8 oz of cane molasses, 3.2 oz of beet molasses

7) 7.7 kg of Brand A, 7 kg of Brand B

8) 4.2 qt. of 5% solution, 6.8 qt. of 60% solution

9) 5.2 ft³ with 30% clay, 7.8 ft³ with 20% clay

10) 0.6 fl. oz. of 10% solution, 8.4 fl. oz. of 40% solution

11) 3.6 ml of 70% solution, 4.4 ml of 10% solution

12) 4.2 m³ with 30% clay, 9.8 m³ with 10% clay

13) 10.6 kg of Brand A, 15.9 kg of Brand B

14) 6.6 ft³ with 15% silt, 3.3 ft³ with 30% silt

15) 5.6 m³ with 25% clay, 2.4 m³ with 45% clay

16) 10 oz. of 28% platinum, 2 oz. of 34% platinum

17) 7 lb of arugula, 11 lb of spinach

18) 0.6 lb of arabica coffee beans, 10.2 lb of robusta coffee beans

19) 1 fl. oz. of 60% solution, 0.5 fl. oz. of 90% solution

20) 19.8 kg of Brand A, 13.2 kg of Brand B

21) 2.4 gal. of 90% solution, 0.8 gal. of 30% solution

22) 9.1 kg of Brand A, 16.9 kg of Brand B

23) 1.6 fl. oz. of 80% solution, 4.8 fl. oz. of pure water

24) 4.5 fl. oz. of 34% solution, 5.7 fl. oz. of pure water

Assignment

1) Heather wants to make 8 gal. of a 67% saline solution by mixing together a 40% saline solution and a 70% saline solution. How much of each solution must she use?

2) Brand M Cinnamon which costs $15.76/kg is made by combining Indonesian cinnamon which costs $15.85/kg with Thai cinnamon which costs $15.70/kg. Find the number of kg of Indonesian cinnamon and Thai cinnamon required to make 12 kg of Brand M Cinnamon.

3) A metallurgist needs to make 4 oz. of an alloy containing 49% gold. She is going to melt and combine one metal that is 70% gold with another metal that is 35% gold. How much of each should she use?

4) Mixed nuts which cost $8.50/kg are made by combining walnuts which cost $2.90/kg with peanuts which cost $10.50/kg. Find the number of kg of walnuts and peanuts required to make 5.7 kg of mixed nuts.

5) A metallurgist needs to make 3.5 lb. of an alloy containing 50% platinum. She is going to melt and combine one metal that is 30% platinum with pure platinum. How much of each should she use?

6) Asanji's Red Hot Peanuts which cost $1.90/kg are made by combining peanuts which cost $1.20/kg with spices which cost $4/kg. Find the number of kg of peanuts and spices required to make 13.6 kg of Asanji's Red Hot Peanuts.

7) Brand M Cinnamon which costs $13.78/kg is made by combining Indonesian cinnamon which costs $12.70/kg with Thai cinnamon which costs $14.14/kg. Find the number of kg of Indonesian cinnamon and Thai cinnamon required to make 4 kg of Brand M Cinnamon.

8) Generic sugar which costs $4.70/lb is made by combining brand X sugar which costs $4.84/lb with brand Y sugar which costs $4/lb. Find the number of lb of brand X sugar and brand Y sugar required to make 19.8 lb of generic sugar.

9) Brand X sells 19 kg bags of mixed nuts that contain 37% peanuts. To make their product they combine Brand A mixed nuts which contain 40% peanuts and Brand B mixed nuts which contain 30% peanuts. How much of each do they need to use?

10) To build the garden of your dreams you need 8 m³ of soil containing 70% silt. You have two types of soil you can combine to achieve this: soil with 52% silt and pure silt. How much of each soil should you use?

11) Joe asked you to make 12.6 L of fruit punch that contains 45% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 55% fruit juice and Brand B contains 20% fruit juice. How much of each do you need?

12) Brand X sells 22 kg bags of mixed nuts that contain 45% peanuts. To make their product they combine Brand A mixed nuts which contain 16% peanuts and Brand B mixed nuts which contain 74% peanuts. How much of each do they need to use?

13) A metallurgist needs to make 9 kg of an alloy containing 53% nickel. He is going to melt and combine one metal that is 60% nickel with another metal that is 30% nickel. How much of each should he use?

14) To build the garden of your dreams you need 9 ft³ of soil containing 24% clay. You have two types of soil you can combine to achieve this: soil with 20% clay and soil with 50% clay. How much of each soil should you use?

15) Kayla asked you to make 9 L of fruit punch that contains 45% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 59% fruit juice and Brand B contains 38% fruit juice. How much of each do you need?

16) To build the garden of your dreams you need 4 yd³ of soil containing 20% silt. You have two types of soil you can combine to achieve this: soil with 10% silt and soil with 30% silt. How much of each soil should you use?

17) Scott sells 23.5 oz. bags of mixed nuts that contain 68% peanuts. To make his product he adds peanuts to Brand A's mixed nuts which contain 20% peanuts. How much of each does he combine?

18) A metallurgist needs to make 15 oz. of an alloy containing 40% platinum. He is going to melt and combine one metal that is 30% platinum with another metal that is 60% platinum. How much of each should he use?

19) Elisa wants to make 5 qt. of a 42% alcohol solution by mixing together a 30% alcohol solution and a 60% alcohol solution. How much of each solution must she use?

20) DeShawn wants to make 9 ml of a 49% sugar solution by mixing together a 30% sugar solution and a 60% sugar solution. How much of each solution must he use?

21) To build the garden of your dreams you need 11 ft³ of soil containing 44% clay. You have two types of soil you can combine to achieve this: soil with 50% clay and soil with 30% clay. How much of each soil should you use?

22) Molly wants to make 12 fl. oz. of a 19% sugar solution by mixing together a 70% sugar solution and a 10% sugar solution. How much of each solution must she use?

23) To build the garden of your dreams you need 5.4 m³ of soil containing 60% silt. You have two types of soil you can combine to achieve this: soil with 40% silt and pure silt. How much of each soil should you use?

24) Shreya wants to make 3 qt. of a 42% sugar solution by mixing together a 90% sugar solution and pure water. How much of each solution must she use?

Answers to Assignment (ID: 5)

1) 0.8 gal. of 40% solution, 7.2 gal. of 70% solution

2) 4.8 kg of Indonesian cinnamon, 7.2 kg of Thai cinnamon

3) 1.6 oz. of 70% gold, 2.4 oz. of 35% gold

4) 1.5 kg of walnuts, 4.2 kg of peanuts

5) 2.5 lb. of 30% platinum, 1 lb. of pure platinum

6) 10.2 kg of peanuts, 3.4 kg of spices

7) 1 kg of Indonesian cinnamon, 3 kg of Thai cinnamon

8) 16.5 lb of brand X sugar, 3.3 lb of brand Y sugar

9) 13.3 kg of Brand A, 5.7 kg of Brand B

10) 5 m³ with 52% silt, 3 m³ of silt

11) 9 L of Brand A, 3.6 L of Brand B

12) 11 kg of Brand A, 11 kg of Brand B

13) 6.9 kg of 60% nickel, 2.1 kg of 30% nickel

14) 7.8 ft³ with 20% clay, 1.2 ft³ with 50% clay

15) 3 L of Brand A, 6 L of Brand B

16) 2 yd³ with 10% silt, 2 yd³ with 30% silt

17) 9.4 oz. of Brand A, 14.1 oz. of peanuts

18) 10 oz. of 30% platinum, 5 oz. of 60% platinum

19) 3 qt. of 30% solution, 2 qt. of 60% solution

20) 3.3 ml of 30% solution, 5.7 ml of 60% solution

21) 7.7 ft³ with 50% clay, 3.3 ft³ with 30% clay

22) 1.8 fl. oz. of 70% solution, 10.2 fl. oz. of 10% solution

23) 3.6 m³ with 40% silt, 1.8 m³ of silt

24) 1.4 qt. of 90% solution, 1.6 qt. of pure water

Name_____

Assignment

Date_____ Period____

1) Sarawong wants to make 1.5 gal. of a 38% saline solution by mixing together a 50% saline solution and a 20% saline solution. How much of each solution must he use?

2) To build the garden of your dreams you need 11 m³ of soil containing 33% clay. You have two types of soil you can combine to achieve this: soil with 40% clay and soil with 30% clay. How much of each soil should you use?

3) Jimmy wants to make 17.5 fl. oz. of a 44% sugar solution by mixing together a 22% sugar solution and a 77% sugar solution. How much of each solution must he use?

4) To build the garden of your dreams you need 2.1 yd³ of soil containing 50% silt. You have two types of soil you can combine to achieve this: soil with 30% silt and pure silt. How much of each soil should you use?

5) To build the garden of your dreams you need 3.5 yd³ of soil containing 30% sand. You have two types of soil you can combine to achieve this: soil with 50% sand and soil with 15% sand. How much of each soil should you use?

6) Rob asked you to make 14 L of fruit punch that contains 29% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 25% fruit juice and Brand B contains 35% fruit juice. How much of each do you need?

7) To build the garden of your dreams you need 7 yd³ of soil containing 56% sand. You have two types of soil you can combine to achieve this: soil with 30% sand and pure sand. How much of each soil should you use?

8) Ndiba asked you to make 8 gal. of fruit punch that contains 27% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 20% fruit juice and Brand B contains 30% fruit juice. How much of each do you need?

9) Brenda asked you to make 12.5 gal. of fruit punch that contains 44% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 52% fruit juice and Brand B contains 42% fruit juice. How much of each do you need?

10) Premium salad mix which costs $3.56/lb is made by combining arugula which costs $3.86/lb with spinach which costs $2.90/lb. Find the number of lb of arugula and spinach required to make 8 lb of premium salad mix.

11) A metallurgist needs to make 6 kg of an alloy containing 19% gold. He is going to melt and combine one metal that is 70% gold with another metal that is 10% gold. How much of each should he use?

12) Kim wants to make 6 ml of a 16% acid solution by mixing together a 10% acid solution and a 50% acid solution. How much of each solution must she use?

13) A metallurgist needs to make 11.4 oz. of an alloy containing 20% gold. He is going to melt and combine one metal that is 5% gold with pure gold. How much of each should he use?

14) Generic sugar which costs $2.92/kg is made by combining brand X sugar which costs $2.80/kg with brand Y sugar which costs $3.40/kg. Find the number of kg of brand X sugar and brand Y sugar required to make 7.5 kg of generic sugar.

15) Eugene wants to make 8 fl. oz. of a 17% sugar solution by mixing together a 40% sugar solution and pure water. How much of each solution must he use?

16) Jasmine wants to make 4.5 qt. of a 22% acid solution by mixing together a 30% acid solution and pure water. How much of each solution must she use?

17) A metallurgist needs to make 17.5 mg of an alloy containing 60% copper. She is going to melt and combine one metal that is 20% copper with another metal that is 90% copper. How much of each should she use?

18) Brand X sells 13 lbs. bags of mixed nuts that contain 32% peanuts. To make their product they combine Brand A mixed nuts which contain 40% peanuts and Brand B mixed nuts which contain 27% peanuts. How much of each do they need to use?

19) Fruit salad which costs $4.75/kg is made by combining sliced peaches which cost $4.96/kg with sliced bananas which cost $3.10/kg. Find the number of kg of sliced peaches and sliced bananas required to make 6.2 kg of fruit salad.

20) A metallurgist needs to make 3 lb. of an alloy containing 40% platinum. He is going to melt and combine one metal that is 10% platinum with pure platinum. How much of each should he use?

21) Brand X sells 20 lbs. bags of mixed nuts that contain 65% peanuts. To make their product they add peanuts to Brand A's mixed nuts which contain 30% peanuts. How much of each do they combine?

22) A metallurgist needs to make 4 mg of an alloy containing 54% gold. He is going to melt and combine one metal that is 60% gold with another metal that is 20% gold. How much of each should he use?

23) Fruit salad which costs $3.60/oz is made by combining sliced peaches which cost $2.25/oz with sliced bananas which cost $4.10/oz. Find the number of oz of sliced peaches and sliced bananas required to make 11.1 oz of fruit salad.

24) To build the garden of your dreams you need 7 ft³ of soil containing 70% sand. You have two types of soil you can combine to achieve this: soil with 50% sand and pure sand. How much of each soil should you use?

Answers to Assignment (ID: 6)

1) 0.9 gal. of 50% solution, 0.6 gal. of 20% solution

2) 3.3 m³ with 40% clay, 7.7 m³ with 30% clay

3) 10.5 fl. oz. of 22% solution, 7 fl. oz. of 77% solution

4) 1.5 yd³ with 30% silt, 0.6 yd³ of silt

5) 1.5 yd³ with 50% sand, 2 yd³ with 15% sand

6) 8.4 L of Brand A, 5.6 L of Brand B

7) 4.4 yd³ with 30% sand, 2.6 yd³ of sand

8) 2.4 gal. of Brand A, 5.6 gal. of Brand B

9) 2.5 gal. of Brand A, 10 gal. of Brand B

10) 5.5 lb of arugula, 2.5 lb of spinach

11) 0.9 kg of 70% gold, 5.1 kg of 10% gold

12) 5.1 ml of 10% solution, 0.9 ml of 50% solution

13) 9.6 oz. of 5% gold, 1.8 oz. of pure gold

14) 6 kg of brand X sugar, 1.5 kg of brand Y sugar

15) 3.4 fl. oz. of 40% solution, 4.6 fl. oz. of pure water

16) 3.3 qt. of 30% solution, 1.2 qt. of pure water

17) 7.5 mg of 20% copper, 10 mg of 90% copper

18) 5 lbs. of Brand A, 8 lbs. of Brand B

19) 5.5 kg of sliced peaches, 0.7 kg of sliced bananas

20) 2 lb. of 10% platinum, 1 lb. of pure platinum

21) 10 lbs. of Brand A, 10 lbs. of peanuts

22) 3.4 mg of 60% gold, 0.6 mg of 20% gold

23) 3 oz of sliced peaches, 8.1 oz of sliced bananas

24) 4.2 ft³ with 50% sand, 2.8 ft³ of sand

Name_____

Assignment

Date_____ Period_____

1) Ming asked you to make 15 L of fruit punch that contains 67% fruit juice by mixing together some Sweet Tropical Fruit Punch and some grape juice. How much of each ingredient do you need if the Sweet Tropical Fruit Punch contains 10% juice?

2) Kali asked you to make 7.5 L of fruit punch that contains 26% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 50% fruit juice and Brand B contains 10% fruit juice. How much of each do you need?

3) Pranav's Premium Coffee Blend which costs $5.89/oz is made by combining arabica coffee beans which cost $13.20/oz with robusta coffee beans which cost $4.60/oz. Find the number of oz of arabica coffee beans and robusta coffee beans required to make 12 oz of Pranav's Premium Coffee Blend.

4) Farmer Norachai's Produce Stand sells 12 kg bags of mixed nuts that contain 32% peanuts. To make his product he combines Brand A mixed nuts which contain 52% peanuts and Brand B mixed nuts which contain 20% peanuts. How much of each does he need to use?

5) Huong wants to make 5 L of a 40% alcohol solution by mixing together a 50% alcohol solution and pure water. How much of each solution must she use?

6) Matt wants to make 10.5 qt. of a 2% sugar solution by mixing together a 10% sugar solution and pure water. How much of each solution must he use?

7) Mary wants to make 14 L of a 62% sugar solution by mixing together a 32% sugar solution and a 74% sugar solution. How much of each solution must she use?

8) Jennifer wants to make 5 gal. of a 63% sugar solution by mixing together a 70% sugar solution and pure water. How much of each solution must she use?

9) Beth wants to make 11.1 qt. of a 50% acid solution by mixing together a 65% acid solution and a 20% acid solution. How much of each solution must she use?

10) To build the garden of your dreams you need 10.5 yd³ of soil containing 26% sand. You have two types of soil you can combine to achieve this: soil with 20% sand and soil with 30% sand. How much of each soil should you use?

11) Mofor wants to make 6 qt. of a 63% alcohol solution by mixing together a 84% alcohol solution and a 48% alcohol solution. How much of each solution must he use?

12) Perry's Premium Molasses which costs $1/oz is made by combining cane molasses which costs $1.44/oz with beet molasses which costs $0.80/oz. Find the number of oz of cane molasses and beet molasses required to make 6.4 oz of Perry's Premium Molasses.

13) Ted's Red Hot Peanuts which cost $1.58/lb are made by combining peanuts which cost $1.10/lb with spices which cost $3.10/lb. Find the number of lb of peanuts and spices required to make 15 lb of Ted's Red Hot Peanuts.

14) Farmer Jack's Produce Stand sells 16.5 lbs. bags of mixed nuts that contain 58% peanuts. To make his product he combines Brand A mixed nuts which contain 73% peanuts and Brand B mixed nuts which contain 18% peanuts. How much of each does he need to use?

15) Julio asked you to make 6 L of fruit punch that contains 23% 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 30% fruit juice. How much of each do you need?

16) Maria asked you to make 15 L of fruit punch that contains 70% fruit juice by mixing together some Sweet Tropical Fruit Punch and some grape juice. How much of each ingredient do you need if the Sweet Tropical Fruit Punch contains 50% juice?

17) Brand X sells 30 oz. bags of mixed nuts that contain 47% peanuts. To make their product they combine Brand A mixed nuts which contain 20% peanuts and Brand B mixed nuts which contain 70% peanuts. How much of each do they need to use?

18) To build the garden of your dreams you need 5.5 yd³ of soil containing 26% sand. You have two types of soil you can combine to achieve this: soil with 20% sand and soil with 30% sand. How much of each soil should you use?

19) A metallurgist needs to make 13.4 lb. of an alloy containing 65% gold. She is going to melt and combine one metal that is 80% gold with another metal that is 50% gold. How much of each should she use?

20) To build the garden of your dreams you need 4 yd³ of soil containing 39% sand. You have two types of soil you can combine to achieve this: soil with 45% sand and soil with 25% sand. How much of each soil should you use?

21) Daniel asked you to make 6 gal. of fruit punch that contains 21% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 40% fruit juice and Brand B contains 10% fruit juice. How much of each do you need?

22) Dan asked you to make 12 gal. of fruit punch that contains 21% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 6% fruit juice and Brand B contains 26% fruit juice. How much of each do you need?

23) Carlos wants to make 2 qt. of a 49% alcohol solution by mixing together a 55% alcohol solution and a 45% alcohol solution. How much of each solution must he use?

24) Brand X sells 16.5 lbs. bags of mixed nuts that contain 66% peanuts. To make their product they add peanuts to Brand A's mixed nuts which contain 34% peanuts. How much of each do they combine?

Answers to Assignment (ID: 7)

1) 5.5 L fruit punch, 9.5 L grape juice
2) 3 L of Brand A, 4.5 L of Brand B
3) 1.8 oz of arabica coffee beans, 10.2 oz of robusta coffee beans
4) 4.5 kg of Brand A, 7.5 kg of Brand B
5) 4 L of 50% solution, 1 L of pure water
6) 2.1 qt. of 10% solution, 8.4 qt. of pure water
7) 4 L of 32% solution, 10 L of 74% solution
8) 4.5 gal. of 70% solution, 0.5 gal. of pure water
9) 7.4 qt. of 65% solution, 3.7 qt. of 20% solution
10) 4.2 yd³ with 20% sand, 6.3 yd³ with 30% sand
11) 2.5 qt. of 84% solution, 3.5 qt. of 48% solution
12) 2 oz of cane molasses, 4.4 oz of beet molasses
13) 11.4 lb of peanuts, 3.6 lb of spices
14) 12 lbs. of Brand A, 4.5 lbs. of Brand B
15) 2.1 L of Brand A, 3.9 L of Brand B
16) 9 L fruit punch, 6 L grape juice
17) 13.8 oz. of Brand A, 16.2 oz. of Brand B
18) 2.2 yd³ with 20% sand, 3.3 yd³ with 30% sand
19) 6.7 lb. of 80% gold, 6.7 lb. of 50% gold
20) 2.8 yd³ with 45% sand, 1.2 yd³ with 25% sand
21) 2.2 gal. of Brand A, 3.8 gal. of Brand B
22) 3 gal. of Brand A, 9 gal. of Brand B
23) 0.8 qt. of 55% solution, 1.2 qt. of 45% solution
24) 8.5 lbs. of Brand A, 8 lbs. of peanuts

Name_____

Assignment

Date_____ Period____

1) Trevon wants to make 2.8 qt. of a 40% acid solution by mixing together a 70% acid solution and pure water. How much of each solution must he use?

2) Kathryn wants to make 8 ml of a 12% saline solution by mixing together a 20% saline solution and pure water. How much of each solution must she use?

3) Imani asked you to make 10.8 L 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 40% fruit juice and Brand B contains 10% fruit juice. How much of each do you need?

4) Arjun wants to make 13.4 gal. of a 35% acid solution by mixing together a 70% acid solution and pure water. How much of each solution must he use?

5) Anjali wants to make 10 L of a 17% acid solution by mixing together a 50% acid solution and pure water. How much of each solution must she use?

6) Jaidee's special coffee blend which costs $14.65/lb is made by combining brand X coffee which costs $21.10/lb with brand Y coffee which costs $3.90/lb. Find the number of lb of brand X coffee and brand Y coffee required to make 20.8 lb of Jaidee's special coffee blend.

7) Totsakan wants to make 8.7 gal. of a 50% saline solution by mixing together a 60% saline solution and a 30% saline solution. How much of each solution must he use?

8) A metallurgist needs to make 1.5 kg of an alloy containing 54% copper. She is going to melt and combine one metal that is 31% copper with pure copper. How much of each should she use?

9) To build the garden of your dreams you need 2.1 yd³ of soil containing 50% silt. You have two types of soil you can combine to achieve this: soil with 30% silt and pure silt. How much of each soil should you use?

10) Bronze which costs $5.15/lb is made by combining copper which costs $4.92/lb with tin which costs $6.30/lb. Find the number of lb of copper and tin required to make 3.6 lb of bronze.

11) To build the garden of your dreams you need 17.5 yd³ of soil containing 34% sand. You have two types of soil you can combine to achieve this: soil with 10% sand and soil with 52% sand. How much of each soil should you use?

12) Amy asked you to make 11.9 L of fruit punch that contains 70% fruit juice by mixing together some Sweet Tropical Fruit Punch and some grape juice. How much of each ingredient do you need if the Sweet Tropical Fruit Punch contains 58% juice?

13) To build the garden of your dreams you need 7.2 yd³ of soil containing 30% sand. You have two types of soil you can combine to achieve this: soil with 10% sand and soil with 40% sand. How much of each soil should you use?

14) Shawna wants to make 13.5 fl. oz. of a 56% saline solution by mixing together a 78% saline solution and a 12% saline solution. How much of each solution must she use?

15) Jill asked you to make 12.5 L of fruit punch that contains 46% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 40% fruit juice and Brand B contains 55% fruit juice. How much of each do you need?

16) Mark asked you to make 12 L of fruit punch that contains 25% 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 50% fruit juice. How much of each do you need?

17) A metallurgist needs to make 9.5 mg of an alloy containing 52% iron. She is going to melt and combine one metal that is 20% iron with another metal that is 60% iron. How much of each should she use?

18) Joe wants to make 14 ml of a 42% sugar solution by mixing together a 30% sugar solution and a 90% sugar solution. How much of each solution must he use?

19) Jessica asked you to make 14.7 L of fruit punch that contains 30% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 20% fruit juice and Brand B contains 50% fruit juice. How much of each do you need?

20) Jacob's Premium Molasses which costs $2.96/oz is made by combining cane molasses which costs $2.46/oz with beet molasses which costs $3.36/oz. Find the number of oz of cane molasses and beet molasses required to make 9 oz of Jacob's Premium Molasses.

21) A metallurgist needs to make 21.5 lb. of an alloy containing 62% gold. She is going to melt and combine one metal that is 42% gold with another metal that is 85% gold. How much of each should she use?

22) Farmer Kayla's Produce Stand sells 11 kg bags of mixed nuts that contain 31% peanuts. To make her product she combines Brand A mixed nuts which contain 27% peanuts and Brand B mixed nuts which contain 38% peanuts. How much of each does she need to use?

23) Stephanie asked you to make 12 gal. of fruit punch that contains 34% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 24% fruit juice and Brand B contains 40% fruit juice. How much of each do you need?

24) Bronze which costs $3.29/oz is made by combining copper which costs $2.10/oz with tin which costs $8.40/oz. Find the number of oz of copper and tin required to make 9 oz of bronze.

Answers to Assignment (ID: 8)

1) 1.6 qt. of 70% solution, 1.2 qt. of pure water
2) 4.8 ml of 20% solution, 3.2 ml of pure water
3) 3.6 L of Brand A, 7.2 L of Brand B
4) 6.7 gal. of 70% solution, 6.7 gal. of pure water
5) 3.4 L of 50% solution, 6.6 L of pure water
6) 13 lb of brand X coffee, 7.8 lb of brand Y coffee
7) 5.8 gal. of 60% solution, 2.9 gal. of 30% solution
8) 1 kg of 31% copper, 0.5 kg of pure copper
9) 1.5 yd³ with 30% silt, 0.6 yd³ of silt
10) 3 lb of copper, 0.6 lb of tin
11) 7.5 yd³ with 10% sand, 10 yd³ with 52% sand
12) 8.5 L fruit punch, 3.4 L grape juice
13) 2.4 yd³ with 10% sand, 4.8 yd³ with 40% sand
14) 9 fl. oz. of 78% solution, 4.5 fl. oz. of 12% solution
15) 7.5 L of Brand A, 5 L of Brand B
16) 7.5 L of Brand A, 4.5 L of Brand B
17) 1.9 mg of 20% iron, 7.6 mg of 60% iron
18) 11.2 ml of 30% solution, 2.8 ml of 90% solution
19) 9.8 L of Brand A, 4.9 L of Brand B
20) 4 oz of cane molasses, 5 oz of beet molasses
21) 11.5 lb. of 42% gold, 10 lb. of 85% gold
22) 7 kg of Brand A, 4 kg of Brand B
23) 4.5 gal. of Brand A, 7.5 gal. of Brand B
24) 7.3 oz of copper, 1.7 oz of tin

Assignment

1) Eduardo wants to make 17.5 qt. of a 60% saline solution by mixing together a 80% saline solution and a 45% saline solution. How much of each solution must he use?

2) Premium salad mix which costs $4.06/oz is made by combining arugula which costs $3.30/oz with spinach which costs $4.30/oz. Find the number of oz of arugula and spinach required to make 10 oz of premium salad mix.

3) Vegetable oil which costs $2.75/oz is made by combining soybean oil which costs $2.60/oz with canola oil which costs $2.90/oz. Find the number of oz of soybean oil and canola oil required to make 26.2 oz of vegetable oil.

4) To build the garden of your dreams you need 7.5 yd³ of soil containing 92% sand. You have two types of soil you can combine to achieve this: soil with 40% sand and pure sand. How much of each soil should you use?

5) Molly wants to make 14 fl. oz. of a 13% alcohol solution by mixing together a 70% alcohol solution and pure water. How much of each solution must she use?

6) To build the garden of your dreams you need 9 yd³ of soil containing 28% clay. You have two types of soil you can combine to achieve this: soil with 40% clay and soil with 20% clay. How much of each soil should you use?

7) Shreya wants to make 5.6 gal. of a 65% alcohol solution by mixing together a 35% alcohol solution and a 70% alcohol solution. How much of each solution must she use?

8) Abhasra asked you to make 16 L of fruit punch that contains 27% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 50% fruit juice and Brand B contains 10% fruit juice. How much of each do you need?

9) To build the garden of your dreams you need 6 yd³ of soil containing 31% sand. You have two types of soil you can combine to achieve this: soil with 20% sand and soil with 40% sand. How much of each soil should you use?

10) Mike wants to make 9.5 qt. of a 30% sugar solution by mixing together a 25% sugar solution and a 50% sugar solution. How much of each solution must he use?

11) A metallurgist needs to make 16 oz. of an alloy containing 59% copper. He is going to melt and combine one metal that is 40% copper with another metal that is 72% copper. How much of each should he use?

12) A metallurgist needs to make 15 mg of an alloy containing 37% iron. He is going to melt and combine one metal that is 20% iron with another metal that is 45% iron. How much of each should he use?

13) A metallurgist needs to make 10.5 kg of an alloy containing 74% copper. He is going to melt and combine one metal that is 65% copper with pure copper. How much of each should he use?

14) A metallurgist needs to make 13 mg of an alloy containing 59% nickel. She is going to melt and combine one metal that is 2% nickel with another metal that is 80% nickel. How much of each should she use?

15) To build the garden of your dreams you need 15 m³ of soil containing 34% silt. You have two types of soil you can combine to achieve this: soil with 50% silt and soil with 20% silt. How much of each soil should you use?

16) Brenda wants to make 12.5 gal. of a 46% sugar solution by mixing together a 54% sugar solution and a 44% sugar solution. How much of each solution must she use?

17) Adam wants to make 18 qt. of a 49% saline solution by mixing together a 60% saline solution and a 42% saline solution. How much of each solution must he use?

18) James wants to make 11 ml of a 41% sugar solution by mixing together a 90% sugar solution and a 35% sugar solution. How much of each solution must he use?

19) To build the garden of your dreams you need 12 m³ of soil containing 40% sand. You have two types of soil you can combine to achieve this: soil with 45% sand and soil with 30% sand. How much of each soil should you use?

20) Jose wants to make 3.2 fl. oz. of a 25% acid solution by mixing together a 70% acid solution and a 10% acid solution. How much of each solution must he use?

21) Brand M Cinnamon which costs $10.06/kg is made by combining Indonesian cinnamon which costs $9.26/kg with Thai cinnamon which costs $11.26/kg. Find the number of kg of Indonesian cinnamon and Thai cinnamon required to make 15 kg of Brand M Cinnamon.

22) Brand X sells 19.6 lbs. bags of mixed nuts that contain 30% peanuts. To make their product they combine Brand A mixed nuts which contain 60% peanuts and Brand B mixed nuts which contain 20% peanuts. How much of each do they need to use?

23) Amanda wants to make 6.3 L of a 10% alcohol solution by mixing together a 70% alcohol solution and pure water. How much of each solution must she use?

24) Farmer Jasmine's Produce Stand sells 20 lbs. bags of mixed nuts that contain 27% peanuts. To make her product she combines Brand A mixed nuts which contain 20% peanuts and Brand B mixed nuts which contain 40% peanuts. How much of each does she need to use?

Answers to Assignment (ID: 9)

1) 7.5 qt. of 80% solution, 10 qt. of 45% solution

2) 2.4 oz of arugula, 7.6 oz of spinach

3) 13.1 oz of soybean oil, 13.1 oz of canola oil

4) 1 yd³ with 40% sand, 6.5 yd³ of sand

5) 2.6 fl. oz. of 70% solution, 11.4 fl. oz. of pure water

6) 3.6 yd³ with 40% clay, 5.4 yd³ with 20% clay

7) 0.8 gal. of 35% solution, 4.8 gal. of 70% solution

8) 6.8 L of Brand A, 9.2 L of Brand B

9) 2.7 yd³ with 20% sand, 3.3 yd³ with 40% sand

10) 7.6 qt. of 25% solution, 1.9 qt. of 50% solution

11) 6.5 oz. of 40% copper, 9.5 oz. of 72% copper

12) 4.8 mg of 20% iron, 10.2 mg of 45% iron

13) 7.8 kg of 65% copper, 2.7 kg of pure copper

14) 3.5 mg of 2% nickel, 9.5 mg of 80% nickel

15) 7 m³ with 50% silt, 8 m³ with 20% silt

16) 2.5 gal. of 54% solution, 10 gal. of 44% solution

17) 7 qt. of 60% solution, 11 qt. of 42% solution

18) 1.2 ml of 90% solution, 9.8 ml of 35% solution

19) 8 m³ with 45% sand, 4 m³ with 30% sand

20) 0.8 fl. oz. of 70% solution, 2.4 fl. oz. of 10% solution

21) 9 kg of Indonesian cinnamon, 6 kg of Thai cinnamon

22) 4.9 lbs. of Brand A, 14.7 lbs. of Brand B

23) 0.9 L of 70% solution, 5.4 L of pure water

24) 13 lbs. of Brand A, 7 lbs. of Brand B

Name_____

Assignment

Date_____ Period____

1) To build the garden of your dreams you need 11.2 yd³ of soil containing 50% clay. You have two types of soil you can combine to achieve this: soil with 44% clay and pure clay. How much of each soil should you use?

2) Castel wants to make 8 ml of a 8% acid solution by mixing together a 20% acid solution and pure water. How much of each solution must he use?

3) Nicole asked you to make 9 gal. of fruit punch that contains 39% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 60% fruit juice and Brand B contains 25% fruit juice. How much of each do you need?

4) Ryan asked you to make 9.5 gal. of fruit punch that contains 46% fruit juice by mixing together some amount of Brand A fruit punch and some amount of Brand B fruit punch. Brand A contains 40% fruit juice and Brand B contains 55% fruit juice. How much of each do you need?

5) Cody wants to make 7.5 ml of a 30% acid solution by mixing together a 90% acid solution and pure water. How much of each solution must he use?

6) Willie wants to make 11 L of a 14% sugar solution by mixing together a 70% sugar solution and pure water. How much of each solution must he use?

7) A metallurgist needs to make 11.7 mg of an alloy containing 60% platinum. She is going to melt and combine one metal that is 40% platinum with another metal that is 70% platinum. How much of each should she use?

8) A metallurgist needs to make 10.4 lb. of an alloy containing 35% platinum. She is going to melt and combine one metal that is 20% platinum with another metal that is 85% platinum. How much of each should she use?

9) Kali wants to make 4 fl. oz. of a 14% alcohol solution by mixing together a 70% alcohol solution and pure water. How much of each solution must she use?

10) Pranav wants to make 6 L of a 12% alcohol solution by mixing together a 15% alcohol solution and a 10% alcohol solution. How much of each solution must he use?

11) Vegetable oil which costs $1.30/lb is made by combining soybean oil which costs $1/lb with canola oil which costs $2.50/lb. Find the number of lb of soybean oil and canola oil required to make 2.5 lb of vegetable oil.

12) Huong asked you to make 7.5 gal. of fruit punch that contains 46% fruit juice by mixing together some Sweet Tropical Fruit Punch and some apple juice. How much of each ingredient do you need if the Sweet Tropical Fruit Punch contains 10% juice?

13) Matt wants to make 6.6 gal. of a 15% saline solution by mixing together a 30% saline solution and pure water. How much of each solution must he use?

14) To build the garden of your dreams you need 5 yd³ of soil containing 16% sand. You have two types of soil you can combine to achieve this: soil with 12% sand and soil with 22% sand. How much of each soil should you use?

15) Jennifer asked you to make 6 L of fruit punch that contains 51% fruit juice by mixing together some Sweet Tropical Fruit Punch and some apple juice. How much of each ingredient do you need if the Sweet Tropical Fruit Punch contains 16% juice?

16) Farmer Krystal's Produce Stand sells 15 lbs. bags of mixed nuts that contain 48% peanuts. To make her product she combines Brand A mixed nuts which contain 40% peanuts and Brand B mixed nuts which contain 60% peanuts. How much of each does she need to use?

17) Farmer Beth's Produce Stand sells 15 oz. bags of mixed nuts that contain 36% peanuts. To make her product she combines Brand A mixed nuts which contain 40% peanuts and Brand B mixed nuts which contain 30% peanuts. How much of each does she need to use?

18) Generic sugar which costs $3.25/lb is made by combining brand X sugar which costs $2.80/lb with brand Y sugar which costs $3.40/lb. Find the number of lb of brand X sugar and brand Y sugar required to make 2 lb of generic sugar.

19) Fruit salad which costs $6.71/oz is made by combining sliced peaches which cost $7.20/oz with sliced bananas which cost $2.30/oz. Find the number of oz of sliced peaches and sliced bananas required to make 11 oz of fruit salad.

20) Jack asked you to make 9.1 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 45% fruit juice. How much of each do you need?

21) Ted's special coffee blend which costs $10.49/lb is made by combining brand X coffee which costs $16.85/lb with brand Y coffee which costs $3.60/lb. Find the number of lb of brand X coffee and brand Y coffee required to make 5 lb of Ted's special coffee blend.

22) Jenny asked you to make 13.5 L of fruit punch that contains 60% fruit juice by mixing together some Sweet Tropical Fruit Punch and some grape juice. How much of each ingredient do you need if the Sweet Tropical Fruit Punch contains 25% juice?

23) Maria wants to make 3 L of a 35% alcohol solution by mixing together a 42% alcohol solution and pure water. How much of each solution must she use?

24) Lea wants to make 7.2 ml of a 30% saline solution by mixing together a 80% saline solution and a 20% saline solution. How much of each solution must she use?

Answers to Assignment (ID: 10)

1) 10 yd³ with 44% clay, 1.2 yd³ of clay
2) 3.2 ml of 20% solution, 4.8 ml of pure water
3) 3.6 gal. of Brand A, 5.4 gal. of Brand B
4) 5.7 gal. of Brand A, 3.8 gal. of Brand B
5) 2.5 ml of 90% solution, 5 ml of pure water
6) 2.2 L of 70% solution, 8.8 L of pure water
7) 3.9 mg of 40% platinum, 7.8 mg of 70% platinum
8) 8 lb. of 20% platinum, 2.4 lb. of 85% platinum
9) 0.8 fl. oz. of 70% solution, 3.2 fl. oz. of pure water
10) 2.4 L of 15% solution, 3.6 L of 10% solution
11) 2 lb of soybean oil, 0.5 lb of canola oil
12) 4.5 gal. fruit punch, 3 gal. apple juice
13) 3.3 gal. of 30% solution, 3.3 gal. of pure water
14) 3 yd³ with 12% sand, 2 yd³ with 22% sand
15) 3.5 L fruit punch, 2.5 L apple juice
16) 9 lbs. of Brand A, 6 lbs. of Brand B
17) 9 oz. of Brand A, 6 oz. of Brand B
18) 0.5 lb of brand X sugar, 1.5 lb of brand Y sugar
19) 9.9 oz of sliced peaches, 1.1 oz of sliced bananas
20) 6.5 gal. of Brand A, 2.6 gal. of Brand B
21) 2.6 lb of brand X coffee, 2.4 lb of brand Y coffee
22) 7.2 L fruit punch, 6.3 L grape juice
23) 2.5 L of 42% solution, 0.5 L of pure water
24) 1.2 ml of 80% solution, 6 ml of 20% solution