

Proportion Solving Assignment 1

1. $\frac{3}{5} = \frac{\quad}{40}$

2. $\frac{5}{6} = \frac{\quad}{54}$

3. $\frac{4}{9} = \frac{\quad}{45}$

4. $\frac{3}{5} = \frac{\quad}{40}$

5. $\frac{3}{4} = \frac{\quad}{36}$

6. $\frac{5}{7} = \frac{30}{\quad}$

7. $\frac{\quad}{9} = \frac{16}{24}$

8. $\frac{9}{\quad} = \frac{36}{60}$

9. $\frac{5}{6} = \frac{15}{\quad}$

10. $\frac{\quad}{40} = \frac{6}{8}$

11. $\frac{4}{10} = \frac{\quad}{40}$

12. $\frac{4}{6} = \frac{\quad}{15}$

13. $\frac{2}{1\frac{1}{2}} = \frac{4}{\quad}$

14. $\frac{2\frac{1}{2}}{3\frac{1}{2}} = \frac{6}{\quad}$

15. Apples sell at 6 for 43 cents. How much for 18 apples?

16. A basketball player made 7 free throws out of every 10 attempts. How many free throws did he make in 130 attempts?

17. If a car averages 8 kilometers per liter of gasoline, how many kilometers can it go on 23 liters?

18. On a map, 3 centimeters represents 75 kilometers. How many kilometers of actual distance is represented by 6.4 centimeters on the map?

19. Oranges sell at 5 for 39 cents. How much do 18 oranges cost?

Proportion Solving Assignment 1

- | | |
|--|---|
| <p>20. Ms. Jones uses 1 kg of sliced turkey for each 8 dinner guests. How much sliced turkey would she use for 220 guests?</p> <p>21. Jack mixes 525 kg of sand with each 6 sacks of cement. How much sand would he mix with 20 sacks of cement?</p> <p>22. Alex bought 5 shares of stock for \$436.25. How much would he pay for 12 shares of the same stock?</p> <p>23. Delta has a property tax of \$9.75 per \$5000 value. Your home is valued at \$250,000. How much are your taxes?</p> <p>24. Doris bought 8 bags of fertilizer for \$57.52. She needs 3 more bags. How much will the 3 bags cost on their own?</p> <p>25. Rob drove in 64 runs in 285 times at bat. How many times must he bat to drive in 130 runs?</p> | <p>26. Ella earned \$15.75 in interest on savings of \$300. How much interest would he earn on savings of \$550?</p> <p>27. Jamie recalls years ago paying \$16.50 in sales tax when she bought a used car for \$550.00. How much sales tax did she pay per dollar?</p> <p>28. Mike used 0.5 kg of grass seed to cover 22.5 m² of lawn. How many kg of seed would he use to cover 162 m² of lawn?</p> <p>29. 12 600 kg of sand is needed to make 27 m³ of concrete. How much concrete can be made with 16 800 kg of sand?</p> <p>30. Bob bought 4 dozen cupcakes for \$13.85. How much did 1 cupcake cost him?</p> |
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Proportion Solving Assignment 1 Answers

1. $\frac{3}{5} = \frac{\quad}{40} = 24$

2. $\frac{5}{6} = \frac{\quad}{54} = 45$

3. $\frac{4}{9} = \frac{\quad}{45} = 20$

4. $\frac{3}{5} = \frac{\quad}{40} = 24$

5. $\frac{3}{4} = \frac{\quad}{36} = 27$

6. $\frac{5}{7} = \frac{30}{\quad} = 42$

7. $\frac{\quad}{9} = \frac{16}{24} = 5.9... \Rightarrow 6$

8. $\frac{9}{\quad} = \frac{36}{60} = 15$

9. $\frac{5}{6} = \frac{15}{\quad} = 18$

10. $\frac{\quad}{40} = \frac{6}{8} = 30$

11. $\frac{4}{10} = \frac{\quad}{40} = 16$

12. $\frac{4}{6} = \frac{\quad}{15} = 10$

13. $\frac{2}{1\frac{1}{2}} = \frac{4}{\quad} = 3$

14. $\frac{2\frac{1}{2}}{3\frac{1}{2}} = \frac{6}{\quad} = 8\frac{2}{5} \text{ or } 8.4$

15. \$1.29

16. 91

17. 184

18. 160

19. \$1.40 (1.404)

20. 27.5

21. 1750

22. 1047

23. \$487.50

24. \$21.57

25. 579

26. \$28.88 (28.875)

27. \$0.03

28. 3.6 kg

29. 36 m³

30. \$0.29 (0.2885)

Proportion Solving Assignment 2

1. $\frac{3}{5} = \frac{\quad}{80}$

2. $\frac{5}{6} = \frac{\quad}{108}$

3. $\frac{4}{9} = \frac{\quad}{90}$

4. $\frac{3}{5} = \frac{\quad}{80}$

5. $\frac{3}{4} = \frac{\quad}{72}$

6. $\frac{5}{7} = \frac{60}{\quad}$

7. $\frac{\quad}{4.5} = \frac{16}{18}$

8. $\frac{4.5}{\quad} = \frac{36}{60}$

9. $\frac{5}{6} = \frac{30}{\quad}$

10. $\frac{\quad}{120} = \frac{6}{8}$

11. $\frac{4}{10} = \frac{\quad}{50}$

12. $\frac{4}{6} = \frac{\quad}{27}$

13. $\frac{2}{1\frac{1}{2}} = \frac{8}{\quad}$

14. $\frac{2\frac{1}{2}}{3\frac{1}{2}} = \frac{15}{\quad}$

15. Apples sell at 6 for 43 cents. How much for 24 apples?

16. A basketball player made 7 free throws out of every 10 attempts. How many free throws did he make in 230 attempts?

17. If a car averages 8 kilometers per liter of gasoline, how many kilometers can it go on 25 liters?

18. On a map, 3 centimeters represents 75 kilometers. How many kilometers of actual distance is represented by 7.5 centimeters on the map?

19. Oranges sell at 5 for 39 cents. How much do 21 oranges cost?

Proportion Solving Assignment 2

- | | |
|--|---|
| <p>20. Ms. Jones uses 1 kg of sliced turkey for each 8 dinner guests. How much sliced turkey would she use for 200 guests?</p> <p>21. Jack mixes 525 kg of sand with each 6 sacks of cement. How much sand would he mix with 27 sacks of cement?</p> <p>22. Alex bought 5 shares of stock for \$436.25. How much would he pay for 15 shares of the same stock?</p> <p>23. Delta has a property tax of \$9.75 per \$5000 value. Your home is valued at \$350,000. How much are your taxes?</p> <p>24. Doris bought 8 bags of fertilizer for \$57.52. She needs 3 more bags. How much will the 3 bags cost on their own?</p> <p>25. Rob drove in 64 runs in 288 times at bat. How many times must he bat to drive in 160 runs?</p> | <p>26. Ella earned \$15.75 in interest on savings of \$300. How much interest would he earn on savings of \$570?</p> <p>27. Jamie recalls years ago paying \$8.25 in sales tax when she bought a used car for \$275.00. How much sales tax did she pay per dollar?</p> <p>28. Mike used 0.5 kg of grass seed to cover 22.5 m² of lawn. How many kg of seed would he use to cover 281.25 m² of lawn?</p> <p>29. 12 600 kg of sand is needed to make 27 m³ of concrete. How much concrete can be made with 94 500 kg of sand?</p> <p>30. Bob bought 4 dozen cupcakes for \$12.00. How much did 1 cupcake cost him?</p> |
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Proportion Solving Assignment 2 Answers

$$1. \frac{3}{5} = \frac{\quad}{80} = 48$$

$$2. \frac{5}{6} = \frac{\quad}{54} = 90$$

$$3. \frac{4}{9} = \frac{\quad}{45} = 40$$

$$4. \frac{3}{5} = \frac{\quad}{80} = 48$$

$$5. \frac{3}{4} = \frac{\quad}{72} = 54$$

$$6. \frac{5}{7} = \frac{60}{\quad} = 84$$

$$7. \frac{\quad}{4.5} = \frac{16}{18} = 4$$

$$8. \frac{4.5}{\quad} = \frac{36}{60} = 7.5$$

$$9. \frac{5}{6} = \frac{30}{\quad} = 36$$

$$10. \frac{\quad}{120} = \frac{6}{8} = 90$$

$$11. \frac{4}{10} = \frac{\quad}{50} = 20$$

$$12. \frac{4}{6} = \frac{\quad}{27} = 18$$

$$13. \frac{2}{1\frac{1}{2}} = \frac{8}{\quad} = 6$$

$$14. \frac{2\frac{1}{2}}{3\frac{1}{2}} = \frac{15}{\quad} = 21$$

$$15. \frac{6}{0.43} = \frac{24}{\quad} = \$1.72$$

$$16. \frac{7}{10} = \frac{\quad}{230} = 161$$

$$17. \frac{8}{1} = \frac{\quad}{25} = 200$$

$$18. \frac{3}{75} = \frac{7.5}{\quad} = 187.5$$

$$19. \frac{5}{0.39} = \frac{21}{\quad} = \$1.64 \text{ } (\$1.638 \text{ or } 163.8\text{¢})$$

$$20. \frac{1}{8} = \frac{\quad}{200} = 25$$

$$21. \frac{525}{6} = \frac{\quad}{27} = 2362.5 \text{ kg}$$

$$22. \frac{5}{436.25} = \frac{15}{\quad} = \$1308.75$$

$$23. \frac{9.75}{5,000} = \frac{\quad}{350,000} = \$682.50$$

$$24. \frac{57.52}{8} = \frac{\quad}{1} = 7.19 \times 3 = \$21.57$$

$$25. \frac{64}{288} = \frac{160}{\quad} = 720$$

$$26. \frac{15.75}{300} = \frac{\quad}{570} = \$29.93 \text{ } (29.925)$$

$$27. \frac{8.25}{275} = \frac{\quad}{1} = 0.03 \text{ } (3\text{¢})$$

$$28. \frac{0.5}{22.5} = \frac{\quad}{281.25} = 6.25$$

$$29. \frac{12,600}{27} = \frac{94,500}{\quad} = 202.5$$

$$30. \frac{48}{12} = \frac{1}{\quad} = \$0.25 \text{ } (25\text{¢})$$

1. Choose the fraction that shows the ratio of 3 dogs to 9 dogs.

[A] $\frac{3}{12}$ [B] $\frac{3}{9}$ [C] $\frac{6}{9}$ [D] $\frac{9}{3}$

[1] _____

2. Express the ratio 10 to 24 as a fraction in lowest terms.

[A] $\frac{5}{12}$ [B] $\frac{10}{24}$ [C] $\frac{5}{6}$ [D] $\frac{12}{5}$

[2] _____

3. The ratio of cars to people in Germany is 325 to 1000. Write this ratio as a fraction in reduced form.

[A] $\frac{13}{40}$ [B] $\frac{325}{1000}$ [C] $\frac{13}{20}$ [D] $\frac{13}{80}$

[3] _____

4. Name the fraction that shows the ratio of 3 vans to 7 vans.

[4] _____

5. Express the ratio 3 to 42 as a fraction in lowest terms.

[5] _____

6. The ratio of cars to people in New Zealand is 425 to 1000. Write this ratio as a fraction in reduced form.

[6] _____

7. There is a law stating that "the ratio of the width to length for the American flag should be 10 to 19". Which one of the following flags is not the correct ratio?

[A] 20 ft. by 45 ft. [B] 30 ft. by 57 ft.
[C] 20 in. by 38 in.
[D] 60 in. by 114 in.

[7] _____

8. There is a law stating that "the ratio of the width to length for the American flag should be 10 to 19". Which one of the following flags is not the correct ratio?

[A] 30 ft. by 59 ft. [B] 50 ft. by 95 ft.
[C] 30 in. by 57 in.
[D] 100 in. by 190 in.

[8] _____

9. The ratio of males to females at a certain university is 5 to 9. If there are 19,530 males at the university, how many females are there?

[A] 34,720 females [B] 10,416 females
[C] 35,154 females [D] 10,850 females

[9] _____

10. The ratio of males to females at a certain university is 7 to 3. If there are 9198 males at the university, how many females are there?

[A] 3504 females [B] 21,024 females
[C] 3942 females [D] 21,462 females

[10] _____

11. There is a law stating that "the ratio of the width to length for the American flag should be 10 to 19". Is a flag measuring 50 by 97 feet of the correct ratio?

[11] _____

12. There is a law stating that "the ratio of the width to length for the American flag should be 10 to 19". Is a flag measuring 30 by 57 feet of the correct ratio?

[12] _____

13. The ratio of males to females at a certain university is 8 to 3. If there are 10,488 males at the university, how many females are there?

[13] _____

14. The ratio of males to females at a certain university is 7 to 4. If there are 12,264 males at the university, how many females are there?

[14] _____

15. Write as a proportion: 5 is to 7 as 10 is to x .

[A] $\frac{x}{5} = \frac{7}{10}$ [B] $\frac{7}{5} = \frac{10}{x}$
 [C] $\frac{5}{7} = \frac{10}{x}$ [D] $x = 14$

[15] _____

16. There are 3 male students to every 6 female students at a local school. Select the statement of the condition when there are 39 male students.

[A] $\frac{3}{6} = \frac{x}{39}$ [B] $\frac{6}{3} = \frac{39}{x}$
 [C] $\frac{3}{6} = \frac{39}{x}$ [D] $\frac{39}{3} = \frac{6}{x}$

[16] _____

17. Write as a proportion: 3 is to 8 as 15 is to x .

[17] _____

18. What is the value of $*$? $\frac{4}{9} = \frac{*}{63}$

[A] 252 [B] 28 [C] 26 [D] 63

[18] _____

19. What is the value of $*$? $\frac{5}{8} = \frac{*}{32}$

[A] 160 [B] 20 [C] 5 [D] 32

[19] _____

Solve:

20. $\frac{9}{2} = \frac{q}{10}$

[A] 45 [B] $\frac{10}{9}$ [C] 90 [D] 18

[20] _____

21. $\frac{5}{3} = \frac{f}{6}$

[A] 10 [B] $\frac{6}{5}$ [C] 20 [D] 15

[21] _____

22. $\frac{7}{n} = \frac{8}{4}$

[A] 14 [B] $1\frac{3}{8}$ [C] $3\frac{1}{2}$ [D] $4\frac{4}{7}$

[22] _____

23. $\frac{13}{n} = \frac{6}{8}$

[A] $9\frac{3}{4}$ [B] $3\frac{1}{2}$ [C] $17\frac{1}{3}$ [D] 3

[23] _____

24. $\frac{64}{25} = \frac{x}{35}$

[A] $\frac{1}{64}$ [B] $13\frac{43}{64}$

[C] $89\frac{3}{5}$ [D] $45\frac{5}{7}$

[24] _____

25. $\frac{4}{49} = \frac{x}{35}$

[A] $\frac{1}{4}$ [B] $428\frac{3}{4}$ [C] $2\frac{6}{7}$ [D] 5

[25] _____

26. What is the value of x ? $\frac{3}{4} = \frac{x}{32}$

[26] _____

27. What is the value of x ? $\frac{5}{6} = \frac{x}{54}$

[27] _____

Solve:

28. $\frac{6}{5} = \frac{x}{15}$

[28] _____

29. $\frac{9}{4} = \frac{j}{24}$

[29] _____

30. $\frac{17}{6} = \frac{x}{21}$

[30] _____

31. $\frac{4}{9} = \frac{x}{5}$

[31] _____

32. If 3 cans of pears cost \$2.52, how many cans of pears can you buy for \$10.92?

[A] 14 [B] 4 [C] 39 [D] 13

[32] _____

33. If Super Store sells 5 giant jaw breakers for \$0.67 and Mighty Mart sells 40 of the giant jaw breakers for \$2.68, which of the following is true?

[A] The unit price for giant jaw breakers is the same at both stores.

[B] The unit price for giant jaw breakers at Mighty Mart is about \$0.07 each.

[C] The unit price for giant jaw breakers at Super Store is about \$0.17 each.

[D] Super Store offers the better buy.

[33] _____

34. A survey indicated that 2 out of 6 doctors use brand X aspirin. If 1,800 doctors were surveyed, how many used brand X?

[A] 900 used brand X

[B] 1,200 used brand X

[C] 600 used brand X

[D] 300 used brand X

[34] _____

35. The cost of 70 shares of Fly-by-Night Airlines is \$77.50. How many shares can you buy with \$775.00?

[35] _____

36. A jar of 252 multi-colored jelly beans contains 84 red jelly beans. If 21 jelly beans are picked from the jar, estimate how many jelly beans will be red.

[36] _____

37. If Super Store sells 5 giant jaw breakers for \$0.48 and Mighty Mart sells 25 of the giant jaw breakers for \$2.88, which store offers the better buy?

[37] _____

- [1] B
- [2] A
- [3] A
- [4] $\frac{3}{7}$
- [5] $\frac{1}{14}$
- [6] $\frac{17}{40}$
- [7] A
- [8] A
- [9] C
- [10] C
- [11] no
- [12] yes
- [13] 3933 females
- [14] 7008 females
- [15] C
- [16] C
- [17] $\frac{3}{8} = \frac{15}{x}$
- [18] B
- [19] B
- [20] A
- [21] A
- [22] C
- [23] C
- [24] C
- [25] C
- [26] 24
- [27] 45
- [28] 18
- [29] 54
- [30] $59\frac{1}{2}$
- [31] $2\frac{2}{9}$
- [32] D
- [33] B
- [34] C
- [35] 700 shares
- [36] 7
- [37] Super Store

Proportion & Scaling Practice 02

Solve each proportion.

1. $\frac{1}{2} = \frac{x}{8}$

2. $\frac{1}{2} = \frac{x}{12}$

3. $\frac{n}{16} = \frac{1}{2}$

4. $\frac{1}{3} = \frac{y}{15}$

5. $\frac{t}{7} = \frac{12}{28}$

6. $\frac{x}{12} = \frac{36}{144}$

7. $\frac{t}{10} = \frac{45}{150}$

8. $\frac{x}{8} = \frac{21}{56}$

9. $\frac{9}{n} = \frac{81}{90}$

10. $\frac{3/4}{6} = \frac{n}{24}$

11. $\frac{1/5}{8} = \frac{x}{80}$

12. $\frac{y}{30} = \frac{7/10}{3}$

13. $\frac{60}{d} = \frac{10}{2/3}$

14. $\frac{3}{1/6} = \frac{n}{7}$

15. Find the unit price of 100 grams of sugar for \$1.50.

16. Find the unit price of 4 kilograms of chicken for \$6.76.

17. Find the unit price of 2 pints of frozen yogurt for \$3.84.

18. What is the unit price of 5 kg of apples for \$2.59?

19. What is the unit price of 5 pounds of ground beef for \$9.49?

20. Which is a better buy, 3 pounds of potatoes for \$1.79, or 10 pounds of potatoes for \$6.00?

21. Which is a better buy, a 20 ounce box of cereal for \$4.69, or a 16 ounce box of cereal for \$3.99?

22. Which is a better buy, apples for \$0.79 per pound, or 5 pounds of apples for \$3.50?

23. Which is a better buy, 3 pounds of grapes for \$5.00, or grapes for \$1.59 per pound?

24. A quart of milk costs \$0.79. A gallon of milk costs \$2.59. Which is a better buy?

25. A 12 ounce block of cheese costs \$1.57. A 1 pound block of cheese is \$1.96. Which is a better buy?
26. Which is a better buy, 3 compact disks for \$20, or 5 compact disks for \$30?
-
27. Which is a better buy, 0.5 kilograms of crackers for \$1.69 or 380 grams for \$1.19?
28. Which is a better buy, a 425 gram box of cereal for \$2.99, or a 1 kilogram box of cereal for \$7.29?
-
29. Which is a better buy, 2 liters of soda for \$1.29, or 500 milliliters of soda for \$0.40?
30. Which is a better buy, 2 kilograms of peanuts for \$3.75 or 500 grams for \$0.99?
-
31. If Barbara walks at a rate of 2 miles per hour, how far will she walk in 3 hours?
32. If Mr. Isaacs bicycles at a rate of 12 miles per hour, how far will he bicycle in 5 hours?
-
33. Mr. Patel can swim 15 laps in an hour. How many laps can he swim in 3 hours?
34. Isabel runs 8 miles per hour. How long will it take her to run a marathon (26 miles)?
-
35. Marcos walks at an average rate of 3 miles per hour. How long will it take him to walk 6 miles?
36. Jesse runs at an average rate of 15 kilometers per hour. How long will it take him to run 45 kilometers?
-

37. A train left the station at 7:00 a.m. and arrived at its destination at noon. Its average speed was 125 kilometers per hour. How far did it travel?
38. A plane left New Orleans at 11:00 a.m., and arrived in Seattle 5 hours later. The average speed of the plane was 420 miles per hour. How far is it from New Orleans to Seattle?
-
39. If 1 kilometer is about 0.6 miles, how many kilometers are 8 miles?
40. How many miles are 15 kilometers if 1 mile is about 1.6 kilometers?
-
41. How many grams are 4 pounds if 1 pound is 454 grams?
42. If 1 liter is 1.05 quarts, how many liters are 6 quarts?
-
43. How many centimeters are 12 inches if 1 inch is 2.54 centimeters?
44. How many gallons are 6 liters if 1 liter is 0.26 gallons?
-
45. The ratio of Gravenstein to Pippin apples in an orchard is 3:8. Find the number of Pippin apple trees if there are 429 trees in the orchard.
46. In a recent election, the ratio of yes votes to no votes for the new development project was 5:11. A total of 5,600 people voted. How many voted for the new development project?
-
47. The sides of a triangle are in the ratio 2:3:5. The perimeter is 50 inches. Find the length of each side.
48. How many stone does Elizabeth weigh, if she weighs 105 pounds? One stone is equal to 14 pounds.
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Answer List

- | | |
|---|-----------------------------------|
| 1. 4 | 2. 6 |
| 3. 8 | 4. 5 |
| 5. 3 | 6. 3 |
| 7. 3 | 8. 3 |
| 9. 10 | 10. 3 |
| 11. 2 | 12. 7 |
| 13. 4 | 14. 126 |
| 15. \$0.15 per gram 1.5¢ or \$0.015 per gram | 16. \$1.69 per kilogram |
| 17. \$1.92 per pint | 18. \approx \$0.52 per kilogram |
| 19. \approx \$1.90 per pound | 20. 3 pounds for \$1.79 |
| 21. 20 ounces for \$4.69 | 22. 5 pounds for \$3.50 |
| 23. \$1.59 per pound | 24. a gallon for \$2.59 |
| 25. 1 pound for \$1.96 | 26. 5 compact disks for \$30 |
| 27. 380 grams for \$1.19 | 28. 425 grams for \$2.99 |
| 29. 2 liters for \$1.29 | 30. 2 kilograms for \$3.75 |
| 31. 6mi | 32. 60mi |
| 33. 45laps | 34. 3.25 hrs |
| 35. 2hrs | 36. 3 hrs |
| 37. 625 km | 38. 2,100mi |
| 39. $13\frac{1}{3}$ km | 40. 9.375mi |
| 41. 1816 g | 42. \approx 5.7l |
| 43. 30.48 cm | 44. 1.56 gal |
| 45. 312 trees | 46. 1,750 people |
| 47. 10 in, 15 in, 25 in | 48. 7.5 stone |

Catalog List

- | | | |
|---------------|---------------|---------------|
| 1. PRE GD 1 | 2. PRE GD 2 | 3. PRE GD 3 |
| 4. PRE GD 4 | 5. PRE GD 29 | 6. PRE GD 30 |
| 7. PRE GD 31 | 8. PRE GD 32 | 9. PRE GD 33 |
| 10. PRE GD 53 | 11. PRE GD 54 | 12. PRE GD 55 |
| 13. PRE GD 58 | 14. PRE GD 60 | 15. PRE GE 2 |
| 16. PRE GE 3 | 17. PRE GE 4 | 18. PRE GE 5 |
| 19. PRE GE 6 | 20. PRE GE 25 | 21. PRE GE 26 |
| 22. PRE GE 27 | 23. PRE GE 28 | 24. PRE GE 29 |
| 25. PRE GE 30 | 26. PRE GE 35 | 27. PRE GE 41 |
| 28. PRE GE 42 | 29. PRE GE 43 | 30. PRE GE 44 |
| 31. PRE GL 1 | 32. PRE GL 2 | 33. PRE GL 3 |
| 34. PRE GL 4 | 35. PRE GL 21 | 36. PRE GL 22 |
| 37. PRE GL 27 | 38. PRE GL 28 | 39. PRE GM 1 |
| 40. PRE GM 2 | 41. PRE GM 3 | 42. PRE GM 4 |
| 43. PRE GM 11 | 44. PRE GM 12 | 45. PRE GM 25 |
| 46. PRE GM 26 | 47. PRE GM 29 | 48. PRE GM 30 |