Math 8IB Name_____

Practice with Ratios & Proportions

State if each pair of ratios forms a proportion.

1) $\frac{6}{12}$ and $\frac{3}{4}$

2) $\frac{10}{12}$ and $\frac{2}{3}$

3) $\frac{3}{4}$ and $\frac{15}{16}$

4) $\frac{3}{4}$ and $\frac{12}{24}$

5) $\frac{3}{2}$ and $\frac{12}{6}$

6) $\frac{12}{10}$ and $\frac{3}{2}$

7) $\frac{2}{3}$ and $\frac{4}{6}$

8) $\frac{9}{20}$ and $\frac{3}{4}$

9) $\frac{16}{18}$ and $\frac{4}{3}$

10) $\frac{20}{8}$ and $\frac{4}{2}$

Solve each proportion.

11) $\frac{5}{6x} = \frac{7}{6}$

12) $\frac{n}{4} = \frac{2}{10}$

13) $\frac{12}{3} = \frac{n}{7}$

14) $\frac{6}{4} = \frac{3}{p}$

15) $\frac{4}{6k} = \frac{2}{7}$

16) $\frac{m}{12} = \frac{9}{5}$

17) $\frac{n}{12} = \frac{11}{2}$

18) $\frac{2}{11} = \frac{5}{x}$

19) $\frac{3}{k} = \frac{11}{7}$

20) $\frac{9}{x} = \frac{10}{11}$

21) $\frac{10}{p} = \frac{11}{6}$

22) $\frac{10}{7} = \frac{a}{11}$

23) $\frac{8}{11} = \frac{m}{2}$

24) $\frac{8}{12} = \frac{r}{4}$

25) $\frac{12}{5} = \frac{10}{b}$

26) $\frac{5}{11} = \frac{11}{r}$

27) $\frac{10}{9} = \frac{x}{12}$

28) $\frac{5}{11} = \frac{v}{10}$

29) $\frac{n}{5} = \frac{3}{11}$

30) $\frac{4}{n} = \frac{11}{9}$

Solve each by setting up a proportion.

31) The currency in Western Samoa is the Tala. The exchange rate is approximately $8 = 22 Tala. At this rate, how many Tala would you get if you exchanged $24?

32) If you can buy 50 Anjou pears for $40, then how many can you buy with $4?

33) The currency in Malaysia is the Ringgit. The exchange rate is approximately 21 Ringgits for every $6. At this rate, how many dollars would you get if you exchanged 42 Ringgits?

34) 20 bulbs of elephant garlic cost $40. How many bulbs can you buy for $8?

35) Four packages of blueberries cost $12. How many packages of blueberries can you buy for $48?

36) Julio enlarged the size of a painting to a width of 40 in. What is the new height if it was originally 2 in tall and 5 in wide?

37) Kristin bought 14 bunches of seedless red grapes for $34. How many bunches can Julia buy if she has $17?

38) Natalie bought four nectarines for $3. How many nectarines can Eugene buy if he has $15?

39) Maria bought two cans of pineapple chunks for $3. How many cans of pineapple chunks can Micaela buy if she has $42?

40) Scott reduced the size of a photo to a width of 2 in. What is the new height if it was originally 12 in tall and 4 in wide?

41) Nicole reduced the size of a photo to a width of 6 in. What is the new height if it was originally 4 in tall and 12 in wide?

42) The currency in South Africa is the Rand. The exchange rate is approximately 29 Rand to $4. At this rate, how many dollars would you get if you exchanged 87 Rand?

43) 18 bunches of fennel cost $42. How many bunches can you buy for $14?

44) One bag of carrots costs $3. How many bags of carrots can you buy for $9?

45) Jasmine took a trip to the eastern Caribbean islands. Upon leaving she decided to convert all of her Eastern Caribbean Dollars back into dollars. How many dollars did she receive if she exchanged 48 Eastern Caribbean Dollars at a rate of 16 Eastern Caribbean Dollars = $6?

46) Dan reduced the size of a rectangle to a height of 5 in. What is the new width if it was originally 40 in tall and 16 in wide?

47) Kim enlarged the size of a rectangle to a height of 30 in. What is the new width if it was originally 6 in wide and 5 in tall?

48) Alberto reduced the size of a rectangle to a height of 2 in. What is the new width if it was originally 8 in tall and 24 in wide?

49) A photo is 2 in tall and 4 in wide. If it is enlarged to a width of 36 in, then how tall will it be?

50) A photo is 14 in wide and 28 in tall. If it is reduced to a height of 4 in, then how wide will it be?

Solve each question by setting up a proportion.

51) A cardboard box that is 3 ft tall casts a shadow that is 6 ft long. Find the length of the shadow that a 6 ft man casts.

52) A 8 ft tall telephone booth standing next to a baby giraffe casts a 20 ft shadow. If the baby giraffe is 6 ft tall, then how long is its shadow?

53) A model giraffe is 8 in tall. If it was built with a scale of 1 in : 2 ft, then how tall is the real giraffe?

54) Find the distance between Smithville and Clinton on a map with a scale of 2 cm : 12 km if they are actually 48 km apart.

55) If a 8 ft tall cardboard box casts a 14 ft long shadow, then how tall is a baby elephant that casts a 7 ft shadow?

56) A particular car is 12 ft long. A model of it was built with a scale of 1 in : 4 ft. How long is the model?

57) A model car has a scale of 2 in : 1 ft. If the real car is 14 ft long, then how long is the model car?

58) A map has a scale of 4 cm : 14 km. If Rockville and Victoria are 8 cm apart on the map, then how far apart are the real cities?

59) A map has a scale of 3 in : 4 mi. If Fairview and Rivertown are 8 mi apart, then they are how far apart on the map?

60) A map has a scale of 2 in : 8 mi. If Georgetown and Fairview are 24 mi apart, then they are how far apart on the map?

61) Georgetown and Centerville are 6 cm apart on a map that has a scale of 2 cm : 14 km. How far apart are the real cities?

62) Find the distance between Madison and Marion if they are 6 in apart on a map with a scale of 2 in : 7 mi.

63) A model satellite has a scale of 5 cm : 3 m. If the real satellite is 15 m wide, then how wide is the model satellite?

64) A model statue has a scale of 4 in : 3 ft. If the real statue is 21 ft tall, then how tall is the model statue?

65) A model statue has a scale of 1 in : 2 ft. If the model statue is 6 in tall, then how tall is the real statue?

66) Find the distance between Fairview and San Jose on a map with a scale of 2 cm : 13 km if they are actually 26 km apart.

67) A 4 ft tall petrified stump standing next to a tent casts a 2 ft shadow. If the tent casts a shadow that is 5 ft long, then how tall is it?

68) A model satellite has a scale of 2 in : 3 ft. If the real satellite is 12 ft wide, then how wide is the model satellite?

69) A 16 ft tall adult giraffe standing next to a baby giraffe casts a 20 ft shadow. If the baby giraffe casts a shadow that is 10 ft long, then how tall is it?

70) A particular rocket is 12 m tall. A model of it was built with a scale of 1 cm : 6 m. How tall is the model?

Answers to Practice with Ratios & Proportions (ID: 1)

1) No
2) No
3) No
4) No
5) No
6) No
7) Yes
8) No
9) No
10) No
11) $\left\{\frac{5}{7}\right\}$
12) $\left\{\frac{4}{5}\right\}$
13) $\{28\}$
14) $\{2\}$
15) $\left\{\frac{7}{3}\right\}$
16) $\left\{\frac{108}{5}\right\}$
17) $\{66\}$
18) $\left\{\frac{55}{2}\right\}$
19) $\left\{\frac{21}{11}\right\}$
20) $\left\{\frac{99}{10}\right\}$
21) $\left\{\frac{60}{11}\right\}$
22) $\left\{\frac{110}{7}\right\}$
23) $\left\{\frac{16}{11}\right\}$
24) $\left\{\frac{8}{3}\right\}$
25) $\left\{\frac{25}{6}\right\}$
26) $\left\{\frac{121}{5}\right\}$
27) $\left\{\frac{40}{3}\right\}$
28) $\left\{\frac{50}{11}\right\}$
29) $\left\{\frac{15}{11}\right\}$
30) $\left\{\frac{36}{11}\right\}$
31) 66 Tala
32) 5
33) $12
34) 4
35) 16
36) 16 in
37) 7
38) 20
39) 28
40) 6 in
41) 2 in
42) $12
43) 6
44) 3
45) $18
46) 2 in
47) 36 in
48) 6 in
49) 18 in
50) 2 in
51) 12 ft
52) 15 ft
53) 16 ft
54) 8 cm
55) 4 ft
56) 3 in
57) 28 in
58) 28 km
59) 6 in
60) 6 in
61) 42 km
62) 21 mi
63) 25 cm
64) 28 in
65) 12 ft
66) 4 cm
67) 10 ft
68) 8 in
69) 8 ft
70) 2 cm