math Antics Worksheets

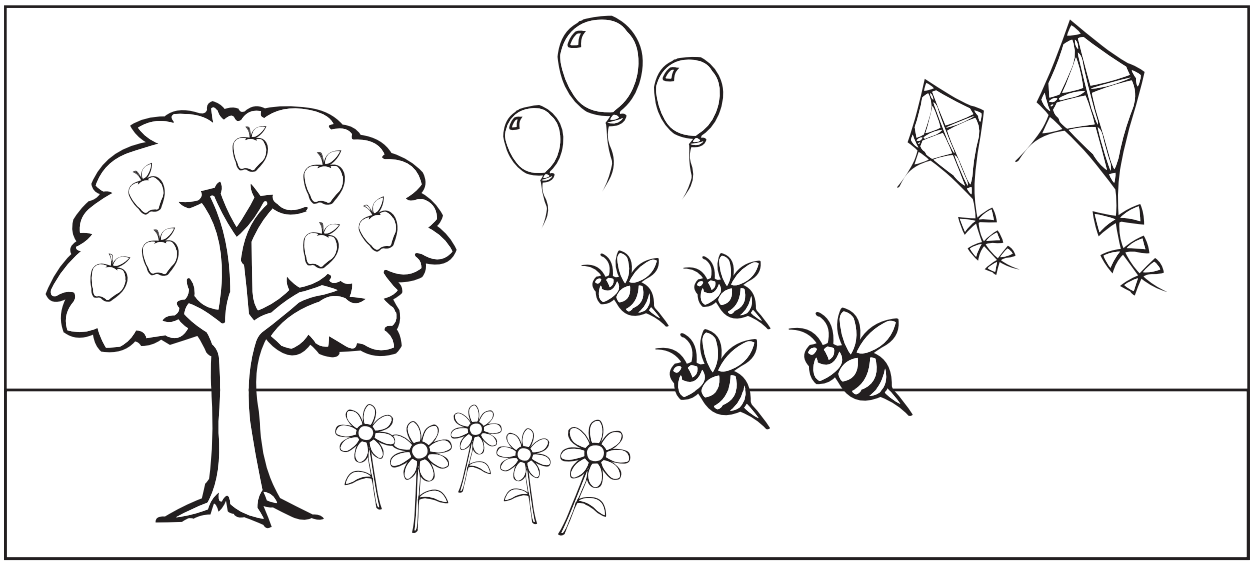
Name:

Date:

What Ratio Is It?

P-RR 1

Instructions: Below you will be asked to find the ratios between various objects in this diagram.



What is the ratio of...

1. Bees to Balloons?

   4 : 3 or $\frac{4}{3}$

2. Flowers to Apples?

   5 : 7 or $\frac{5}{7}$

3. Trees to Flowers?

   1 : 5 or $\frac{1}{5}$

4. Bees to Flowers?

   4 : 5 or $\frac{4}{5}$

5. Kites to Bees?

   2 : 4 or $\frac{2}{4}$

6. Balloons to Trees?

   3 : 1 or $\frac{3}{1}$

7. Kites to Apples?

   2 : 7 or $\frac{2}{7}$

8. Apples to Bees?

   7 : 4 or $\frac{7}{4}$

9. Trees to Apples?

   1 : 7 or $\frac{1}{7}$

10. Kites to Balloons?

    2 : 3 or $\frac{2}{3}$

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Converting to a Unit Rate

P-RR 2

Instructions: Convert each of these rates into a unit rate by dividing the top number by the bottom number. Don't forget the units!

1 $\frac{120 \text{ miles}}{6 \text{ hours}} = \frac{20 \text{ miles}}{1 \text{ hour}}$

120 ÷ 6 = 20

2 $\frac{36 \text{ push-ups}}{2 \text{ minutes}} = \frac{18 \text{ push-ups}}{1 \text{ minute}}$

36 ÷ 2 = 18

3 $\frac{45 \text{ dollars}}{3 \text{ hours}} = \frac{15 \text{ dollars}}{1 \text{ hour}}$

45 ÷ 3 = 15

4 $\frac{250 \text{ km}}{5 \text{ hours}} = \frac{50 \text{ km}}{1 \text{ hour}}$

250 ÷ 5 = 50

5 $\frac{180 \text{ cakes}}{6 \text{ days}} = \frac{30 \text{ cakes}}{1 \text{ day}}$

180 ÷ 6 = 30

6 $\frac{24 \text{ games}}{12 \text{ days}} = \frac{2 \text{ games}}{1 \text{ day}}$

24 ÷ 12 = 2

7 $\frac{100 \text{ meters}}{10 \text{ second}} = \frac{10 \text{ meters}}{1 \text{ second}}$

100 ÷ 10 = 10

8 $\frac{18 \text{ apples}}{9 \text{ days}} = \frac{2 \text{ apples}}{1 \text{ day}}$

18 ÷ 9 = 2

9 $\frac{25 \text{ km}}{10 \text{ hours}} = \frac{2.5 \text{ km}}{1 \text{ hour}}$

25 ÷ 10 = 2.5

10 $\frac{15 \text{ pies}}{2 \text{ days}} = \frac{7.5 \text{ pies}}{1 \text{ day}}$

15 ÷ 2 = 7.5

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Using Unit Rates to Compare

P-RR 3

Instructions: Use unit rates to solve the following word problems.

1 **Tom and Paul are building a brick wall. Tom lays 420 bricks in 6 hours. Paul lays 240 bricks in 3 hours. Whose rate is faster?**

Tom's Rate: $\frac{420}{6} = \frac{70}{1}$ bricks / hour

Paul's Rate: $\frac{240}{3} = \frac{80}{1}$ bricks / hour

70 < 80 so

Paul's rate is faster.

2 **Kim and Ben are planting a garden. Kim plants 24 flowers in 2 hours. Ben plants 33 flowers in 3 hours. Whose rate is faster?**

Kim's Rate: $\frac{24}{2} = \frac{12}{1}$ flowers / hour

Ben's Rate: $\frac{33}{3} = \frac{11}{1}$ flowers / hour

12 > 11 so

Kim's rate is faster.

3 **Ann's Bakery bakes 450 loaves of bread in 3 days. Mark's Bakery bakes 560 loaves of bread in 4 days. Which bakery bakes bread at the faster rate?**

Ann's Rate: $\frac{450}{3} = \frac{150}{1}$ loaves / day

Mark's Rate: $\frac{560}{4} = \frac{140}{1}$ loaves / day

150 > 140 so

Ann's rate is faster.

4 **Dave and Eric are painting a long fence. Dave paints 125 feet of the fence in 5 hours. Eric paints 175 feet in 7 hours. Whose rate is faster?**

Dave's Rate: $\frac{125}{5} = \frac{25}{1}$ feet / hour

Eric's Rate: $\frac{175}{7} = \frac{25}{1}$ feet / hour

25 = 25 so

Their rates are the same!

5 **A bear can run 400 feet in 8 seconds. A horse can run 290 feet in 5 seconds? Which animal runs at the faster rate?**

Bear's Rate: $\frac{400}{8} = \frac{50}{1}$ feet / sec

Horse's Rate: $\frac{290}{5} = \frac{58}{1}$ feet / sec

50 < 58 so

The Horse's rate is faster.

6 **Sam earned $380 working for 8 hours. Rich earned $195 working for 4 hours. Who has the higher rate of pay?**

Sam's Rate: $\frac{380}{8} = \frac{\$47.5}{1}$ hour

Rich's Rate: $\frac{195}{4} = \frac{\$48.75}{1}$ hour

$47.50 < $48.75 so

Rich's rate is higher!