Name Date

MIXED RATIO PROBLEMS 7:5

1. **Take a hike**

A hiking map has a scale of 4 cm : 1 km

The distance between two landmarks on the map is 6 ½ cm.

a) What is the scale of the map in cm as a ratio in simplest form?

b) How far is the distance between the two landmarks in meters?

Tyger walks a total distance of 9,500 m.

c) How many cm will he have travelled on the map?

2. **Currency Swap**

The exchange rate from dollars to pounds (GBP) is 1 ¼ : 1

a) Simplify this ratio so that there are no fractions.

b) Tyger goes on holiday to the UK and changes $300 into pounds. How many pounds is this?

c) He comes back from the holiday with £64. He changes it back into dollars. How many dollars does he get back?

$: £

3. **Anyone for a cruise?**

A cruise ship has 72% of their berths occupied. There are enough berths for 4500 passengers.

a) What is the ratio of full berths to empty berths?

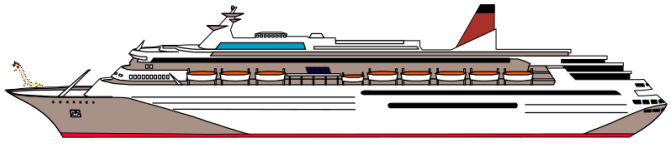
b) Simplify this ratio.

c) How many passengers are on board?

The ship goes at a steady speed of 16 miles per hour.

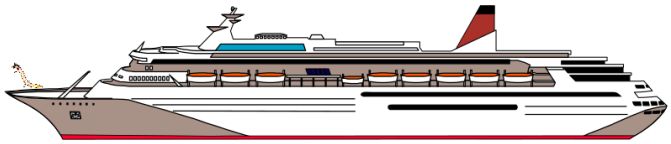
d) How far could the ship travel in 8 hours?

e) How long will it take ths ship to travel 1 mile?



Name Date

MIXED RATIO PROBLEMS 7:5 ANSWERS

1. **Take a hike** A hiking map has a scale of 4 cm : 1 km The distance between two landmarks on the map is 6 ½ cm. a) What is the scale of the map in cm as a ratio in simplest form? b) How far is the distance between the two landmarks in meters? c) Tyger walks a total distance of 9,500 m. How many cm will he have travelled on the map? 	a) 4 cm : 1 km 1 km = 1000 m = 100,000 cm 4 cm : 100,000 cm = 1 : 25,000 b) 6 ½ cm 4 cm = 1 km 2 cm = ½ km = 500 m ½ cm = ⅛ km = 125 m So 6 ½ cm = 1 km 625 m c) 9500 m = 9 ½ km 4 cm : 1 km so multiply by 9 ½ 4 x 9 ½ = (4 x 9) + (4 x ½) = 36 + 2 = 38 So 38 cm on the map = 9500 m
2. **Currency Swap** The exchange rate from dollars to pounds (GBP) is 1 ¼ : 1 a) Simplify this ratio so that there are no fractions. b) Tyger goes on holiday to the UK and changes $300 into pounds. How many pounds is this? c) He comes back from the holiday with £64. He changes it back into dollars. How many dollars does he get back? **$: £** 	a) 1 ¼ : 1 → multiply by 4 1 ¼ : 1 = 5 : 4 The simplified ratio is 5 : 4 b) $1 ¼ : £1 = $1.25 : £1 We need to find $300 : ? $300 ÷ 5 = 60 £4 x 60 = 240 So $300 : £240 He gets £240 c) $1.25 : £1 = $5 : £4 ? : £64 64 ÷ 4 = 16 £5 x 16 = 80 He gets $80 back
3. **Anyone for a cruise?** A cruise ship has 72% of their berths occupied. There are enough berths for 4500 passengers. f) What is the ratio of full berths to empty berths? g) Simplify this ratio. h) How many passengers are on board? The ship goes at a steady speed of 16 miles per hour. i) How far could the ship travel in 8 hours? j) How long will it take ths ship to travel 1 mile? 	a) Full berths 72 out of every 100 so 72 full and 28 empty Ratio of full to empty is 72:28 b) 72:28 →divide by 4 Simplified ratio is 18 : 7 c) 72% of 4500. = 72 ÷ 100 x 4500 = 72 x 45 = 3240 passengers on board d) 16 miles per hour 8 x 16 = 128 So 128 miles in 8 hours e) 16 miles in 60 minutes → divide by 16 1 mile in 60/16 minutes 60 ÷ 16 = 30 ÷ 8 = 15 ÷ 4 = 3 ¾ It takes 3 ¾ minutes or 3 minutes 45 seconds.