



Warm Up Grade 8



TEST Thursday

Very similar to test questions

a) Which is a better deal? Show work

15 markers for \$8.25 or 10 markers for \$5.20

$$\bullet \frac{8.25}{15 \text{ markers}} \rightarrow \frac{0.55}{1 \text{ marker}}$$

$$\frac{5.20}{10 \text{ markers}} \rightarrow \frac{0.52}{1 \text{ marker}}$$

$$16.50 / 30 \text{ markers}$$

$$15.60 / 30 \text{ markers}$$

Cheaper

b) Jim can type 22 words in 20 seconds then how many can he type in 1 minute?

$$\begin{aligned} & \times 3 \quad \frac{22 \text{ words}}{20 \text{ second}} \rightarrow \times 3 \\ & \frac{66 \text{ words}}{60 \text{ seconds}} \end{aligned}$$

2) Express each as an unit rate

→ 2nd term is 1

a) Kim says yes 42 times in 30 seconds

$$84 \text{ yes} / 1 \text{ min}$$

$$\begin{aligned} & \div 30 \quad \frac{42 \text{ yes}}{30 \text{ second}} \\ & \frac{1.4 \text{ yes}}{1 \text{ Sec}} \div 30 \end{aligned}$$

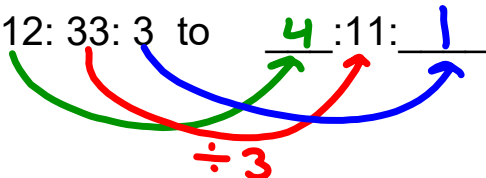
b) A student made \$61.50 in 5 hours

$$\bullet \frac{61.50}{5 \text{ hr}}$$

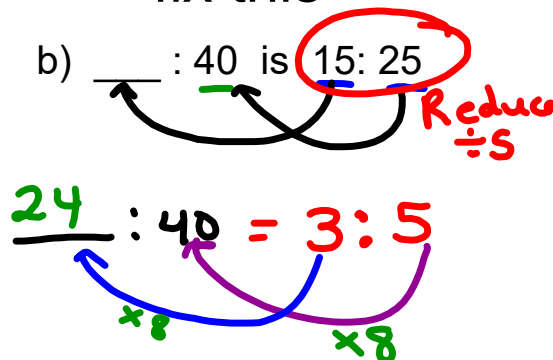
$$\bullet \frac{12.30}{1 \text{ hour}}$$

fix this

3) a) 12:33:3 to $\frac{4}{11} : \frac{1}{1}$



b) $\frac{\quad}{\quad} : 40$ is $\frac{15}{25}$



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14 b)

A

$$12.99 / 3.6 \text{ kg}$$

$$\div 3.6 \quad \div 3.6$$

$$\$3.61 / \text{kg}$$

B

$$\$ 39.99 / 18.1 \text{ kg}$$

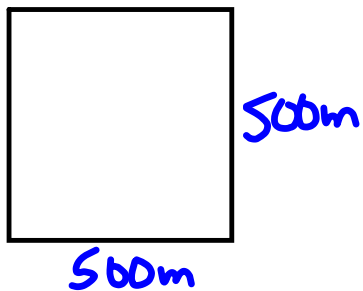
$$\div 18.1 \quad \div 18.1$$

$$\$ 2.21 / \text{kg}$$

Better deal money-wise

d) Might want more dog food

16.



$$A = L \times W$$

$$= 500 \times 500$$

$$= 250\,000 \text{ m}^2$$

$$2.5 \text{ kg} / 1200 \text{ m}^2 = \underline{\quad} \text{ kg} / 250\,000 \text{ m}^2$$

can take to a unit rate

$$2.5 \text{ kg} / 1200 \text{ m}^2$$

live by 1200 divide by 1200

$$= 0.002803 \text{ kg} / \text{m}^2$$

$$= 0.002803 \text{ kg} / \text{m}^2$$

x by 250 000 x by 250 000

$$= 520.803 \text{ kg} / 250\,000 \text{ m}^2$$

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12. a) \$8.4 for 8 hour

$$\begin{array}{r} 8.4 \\ \div 8 \end{array}$$

\$10.50/hr

b) for 35h

10.50 x 35

\$367.50

13. a) \$4.80 for 400g

$$\begin{array}{r} 4.80 \\ \div 4 \end{array}$$

1.20 for 100g

b) 250g

1.20
x 2.5100g
x 2.5

\$3.00 for 250g

c) 1kg = 1000g

1.20 for 100g = $\frac{\quad}{\$12.00}$ for 1000g

$$\begin{array}{r} 1.20 \\ \times 10 \\ \hline \end{array}$$

d) \$18

$$\begin{array}{r} \$12 \\ 3 \\ 3 \\ \hline \$18 \end{array}$$

$$\begin{array}{l} \rightarrow 1000g \\ \rightarrow 250g \\ \rightarrow 250g \\ 1500g \\ \text{or } 1.5kg \end{array}$$

$$14$$

$$\text{a) } \frac{109 \text{ km}}{\text{hr}}$$

$$109 \text{ km} = \frac{109\,000 \text{ m}}{3600 \text{ s}}$$

$$\frac{1 \text{ hr}}{60 \times 60} = \frac{1}{3600} \text{ sec}$$

$$30.3 \text{ m/s}$$

$$\text{b) } \frac{50 \text{ km}}{\text{hr}} = \frac{50\,000 \text{ m}}{3600 \text{ s}} = 13.9 \text{ m/s}$$

$$\text{15. a) } \frac{40 \text{ m}}{\text{s}} \times \frac{3600 \text{ s}}{\text{hr}} = \frac{144\,000 \text{ m}}{\text{hr}} = 144 \text{ km/hr}$$

$$\text{b) } \frac{1.5 \text{ m}}{\text{s}} \times \frac{3600 \text{ s}}{\text{hr}} = \frac{5400 \text{ m}}{\text{hr}} = 5.4 \text{ km/hr}$$

16. 1 hr \rightarrow 25 km
😊

b) Average speed
25 km/hr

17. a) \$: £ = \$: £
2.5 : 1 = : 20
 x20 x20 \$50

\$50 can for £20

b) \$: £ = \$: £
2.5 : 1 = 30 :
 5 : 2 = 30 :
 x6 x6 12

A \$30 can gift has a value of 12 £

18. Eyes: time

225 : 1hr

225 : 60min = : 15min
 ÷4 ÷4 56.25

b) 225 : 60min = : 1min
 ÷60 ÷60 3.75 ÷2 ÷2
 = 1.875 : 1/2 min
 in
 30sec

Assumptions

- constantly working at the same pace.

pg 308 #1, #2, #3, #4, #5a, #7, #11, #12, #20

$$1a) 0.65 = \frac{65}{100} = \frac{13}{20} = 65\%$$

$$b) 0.0069 = \frac{69}{10000} = 0.69\%$$

$$c) 0.0375 = \frac{375}{10000} = \frac{3}{80} = 3.75\%$$

$$d) 0.9825 = \frac{9825}{10000} = \frac{393}{400} = 98.25\%$$

$$2) \text{ Connor } \frac{21}{24} = 0.875 = 87.5\% \quad \text{Rose } 83.\bar{3}\%$$

↑
higher %
so better mark

$$3) a) 38\% = \frac{38}{100} = \frac{19}{50} = 0.38$$

$$b) 93.75\% = \frac{93.75}{100} = \frac{9375}{10000} = \frac{15}{16} = 0.9375$$

$$c) 0.79\% = \frac{0.79}{100} = \frac{79}{10000} = 0.0079$$

$$d) 0.2\% = \frac{0.2}{100} = \frac{2}{1000} = \frac{1}{500} = 0.002$$

$$4) a) 160\% = 1.6$$

$$b) 310\% = 3.1$$

$$c) 0.27\% = 0.0027$$

$$d) 0.9\% = 0.009$$

$$5a) 166\% \text{ of } 26988$$

$$1.66 \times 26988$$

$$44800.08$$

$$\approx 44800$$

44800 people
attended the grey cup

pg 308 #1, #2, #3, #4, #5a, #7, #11, #12, #20

7) 60% of $n = 39$
 $\frac{0.6}{0.6} \times n = \frac{39}{0.6}$
 $n = 65$
 the total for the test was 65
 so Wei made $\frac{39}{65}$ of test

11) Save \$20 Sales Price = \$49.99
 a) Original Price = $49.99 + 20 = \$69.99$
 b) % decrease = $\frac{\text{Difference}}{\text{Original}} \times 100\%$
 $= \frac{20}{69.99} \times 100\%$
 0.28576×100
 $= 28.576\%$
 $\approx 29\%$

12) Amount Discount = Original \times Rate
 $= 89.99 \times 25\%$
 $= 89.99 \times 0.25$
 $= \$22.50$
 Sales Price = Original - Discount Amount
 $= \$89.99 - \22.50
 $= \$67.49$

Tax = 13% of Price
 $= 0.13 \times 67.49$
 $= 8.7737$
 $= \$8.77$

Cost w tax = $67.49 + 8.77$
 $= \$76.26$

20) a) $3:7 = h:70$
 $\frac{3}{7} = \frac{h}{70}$
 $h = 30$
 b) $3:8 = 15:r$
 $\frac{3}{8} = \frac{15}{r}$
 $r = 40$

c) $s:42 = 5:6$
 $\frac{s}{42} = \frac{5}{6}$
 $s = 35$
 d) $84:t:96 = 21:27:24$
 $\frac{84}{21} = \frac{t}{27} = \frac{96}{24}$
 $4 = \frac{t}{27} = 4$
 $t = 9 \times 12$
 $t = 108$

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😊 a) \$399 for 3 weeks
 \$133 for 1 week

b) $680 \div 8$ km in $8 \div 8$ hours

85 km in hours

c) $12 \div 12$ bottles of juice for $3.49 \div 12$

\$0.29 / bottle

d) $3 \div 3$ cans of soup for $0.99 \div 3$

\$0.33 / can

e) \$24.00 for 3h or \$36.00 for 4h
 \$8/hr \$9/hr

\$36 for 4h is greater

b) \$4.50 for 6 muffins OR \$6.00 for 1 dozen

\$9.00 for 12 muffin
 (1 dozen)

\$4.50 for 6 is greater

c) \$0.99 for 250ml OR \$3.59 for 1L
 $\times 4$ $\times 4$

\$3.96 for 1000 ml
 or 1L

\$0.99 for 250ml is greater

7. 😊. \$1.49 for 110ml OR 4.29 for 500ml
 $\times 4$

5.96 for 440ml

so 4.29 for 500ml is a better deal

b) The smaller cost less and she might not have needed 500ml

c) Depending on what the soup was for and how much they needed. - - -

8. 5 for 1.99 OR 8 for 2.99
 $\div 5$ $\div 5$ $\div 8$ $\div 8$

1 for 0.40

1 for 0.37

Better Buy

b) 2L for 4.49 OR 1L for 2.89
 $\times 2$
 2L for 5.78

Better buy

c) 100ml for 1.79 OR 150ml for 2.19
 $\times 1.5$ $\times 1.5$
 150ml for 2.69

Better Deal

d) 500g for 3.49 OR 125g for 0.79
 $\times 4$ $\times 4$

500g for 3.16

Better Deal

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9 a) 525 in 6 hours
 $\div 6$ $\div 6$

87.5 km in 1 hour

b) The distance is how far you expect him to go in 1 hour

c) 525 in 6 hours
 87.5 1 hour
 87.5 1 hour

 700 km 8 hours

You would expect it to take 8 hours to travel 700 km

10

60 km in 3h

68 km in 4hr

70 km in 5h

20 km/hr

17 km/hr

14 km/hr

Greatest average speed 20 km/hr

11.

😊 \$370 in one week is more than \$315 in one week, so the lifeguard job pays more per week (also works more hours)

b) 370 in 40 hour \$315 in 35 hour
 \$9.25/hr \$9/hr

justify answer - almost any answer will be correct if you justify

12. 114 points in 9 games

÷ 9

÷ 9

12.7

in 1 game

Average 12.7 pts / game

b) 12.7 in 1 game = $\frac{12.7 \times 24}{1 \times 24} = \frac{304.8}{24}$: 24 games
 x 24 x 24 304.8
 or
 305 pts.

13. 118.1 cm in 24h = $\frac{118.1 \div 24}{24 \div 24} = \frac{4.9}{1}$: 1hr
 ÷ 24 ÷ 24 4.9

4.9 cm/hr

14
Brand A
12.99 for 3.6 kg
 $\times 4$ $\times 4$
\$52 14.4 kg

Brand B
\$39.99 for 18.1 kg

Brand B is a better buy.

b) Brand A
12.99 for 3.6 kg
 $\div 3.6$ $\div 3.6$
3.61 for 1 kg

39.99 for 18.1 kg
 $\div 18.1$ $\div 18.1$
2.21 for 1 kg

c) Brand B is definitely a better buy.

- d) → Might not have enough
→ Might not want that big bag
→ Might only have a small dog
→ Brand B might not be as nutritious.

15
a) i) Apple 60 cal

Cycling 216 cal / hour
 $\div 4$ $\div 4$

54 cal in 15 min

ii) 2 Slices of bread 140 cal

Walking 270 cal / hour
 $\div 2$ $\div 2$

135 cal 30 min

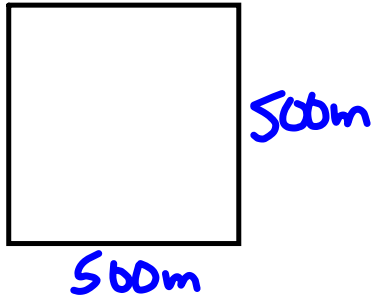
b) ice cream + doughnut

$$290 + 204 = 494 \text{ cal}$$

Swimming burns cal the quickest

Walking for 2 hours or cycling
 for 2 hours would burn the cal

16.



$$\begin{aligned}
 A &= L \times W \\
 &= 500 \times 500 \\
 &= 250\,000 \text{ m}^2
 \end{aligned}$$

$$\begin{aligned}
 1 \text{ bag} &\rightarrow 1200 \text{ m}^2 \\
 100 \text{ bags} &\rightarrow 120\,000 \text{ m}^2 \\
 200 \text{ bags} &\rightarrow 240\,000 \text{ m}^2 \\
 8 \text{ bags} &\rightarrow 9\,600 \text{ m}^2 \quad (8 \times 1200)
 \end{aligned}$$

$$\begin{aligned}
 208 \text{ bags} &\rightarrow 249\,600 \text{ m}^2 \\
 \text{Approx } 208 \text{ bags} &\text{ are needed}
 \end{aligned}$$

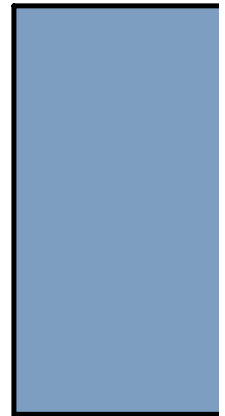
$$17. a) \frac{40}{5}$$

Earn \$40 for 5 hours worked

$$b) \frac{1.75}{100}, \text{ pay } \$1.75 \text{ for } 100\text{g of cheese}$$

18.

Type of Car	Fuel Consumption	Fuel Consumption for 100 km
Toyota Echo	26.8L / 400 km	6.7 L / 100 km
Ford Focus	23.0 L / 250 km	9.2 L / 100 km
Honda Civic	11.25 L / 150 km	7.5 L / 100 km
Saturn Ion	33.25L / 350 km	9.5 L / 100 km
Hyundai Accent	16.2 L / 200 km	8.1 L / 100 km



b) Least Fuel Efficient

$$\begin{array}{r} \text{Saturn} \quad 9.5 \text{ L} / 100 \text{ km} \\ \quad \times 5 \qquad \quad \times 5 \\ \hline 47.5 \text{ L} / 500 \text{ km} \end{array}$$

$$\begin{array}{r} \text{most} \\ \text{Toyota} \quad 6.7 \text{ L} / 100 \text{ km} \\ \quad \times 5 \qquad \quad \times 5 \\ \hline 33.5 \text{ L} / 500 \text{ km} \end{array}$$

TEST OUTLINE

_____, TEST on Chapter 5

Part 1) 5 MC

Part 2) 5 short response

#1) Find the missing number in each equivalent ratio ex) $25 : 5 = \underline{\quad} : 7$

#2) Compare ratios

#3) Given a picture of shapes write the ratios indicated

4) Express as a unit rate (Second term must be 1) Ex) Earn \$90 in 3 hours
then \$30 in 1 Hour

#5) a) Given 2 options to buy, which is the better deal

b) If you need a certain amount which is the best option (Explain)

Examples of test questions

1) 35% of number is 31.5, what is the number?

2) Find the following

a) 25% of 40

b) 34% of 68

d) 0.5% of 120

d) 140% of 320

3) a) find the missing blanks (Show work...hint sometimes you need to reduce)

a) $34:18 = 17: \underline{\quad}$

b) $9:4 = 90: \underline{\quad}$

c) $25:30 = \underline{\quad}: 24$

4) Express the following as a unit rate

a) A truck drives 240 km in 2 hours

b) A women types 80 word is 20 seconds

5) The population of Nova Scotia is about 1 000 000 and the population of Canada is about 39 000 000. About what percent of the population of Canada is Nova Scotia?

6) Find each percent (Show work Mentally)

a) 500% of 200

b) 30% of 140

7) You have \$60 saved in your piggy bank. You want to buy a new shirt that is \$125. The shirt is reduced by 20%. There is 15% tax.

a) Find the discount and the sales price

Discount



sales price

b) Find the sales tax on the sales price and the total price with tax

Sales tax amount



Cost with tax

c) Do you have enough money to buy the shirt?

8) Kim & John wrote 2 test. Kim made 14 out of 21 on the test and John made 32 out of 48. Kim says she did better, is this true? SHOW WORK

9) Jim completed 30% of his homework which is 12 questions.

a) What is his total amount of homework questions did his teacher assign?

b) How many questions does he have left to do?

Class/Homework

Page 308 (Use 15% tax)

#14a (i to iv), 15, 17(a,b), 18(ab), 20(abcd), 21abcd, #24, #25, #27, #28, #30,
#31, #32

page 312 # 7, 8, 9

Test on Unit 5 Percent, Ratio and Rates

TOMORROW April 7