

Equivalent fractions

Write the correct answers.

Are these fractions proper or improper?

- ①  $\frac{3}{5}$  \_\_\_\_\_
- ②  $\frac{7}{9}$  \_\_\_\_\_
- ③  $\frac{11}{9}$  \_\_\_\_\_
- ④  $\frac{6}{5}$  \_\_\_\_\_
- ⑤  $\frac{4}{4}$  \_\_\_\_\_
- ⑥  $\frac{8}{3}$  \_\_\_\_\_



Convert these improper fractions to mixed numbers.

- ⑦  $\frac{18}{3} =$  \_\_\_\_\_
- ⑧  $\frac{10}{2} =$  \_\_\_\_\_
- ⑨  $\frac{37}{6} =$  \_\_\_\_\_
- ⑩  $\frac{27}{8} =$  \_\_\_\_\_
- ⑪  $\frac{19}{3} =$  \_\_\_\_\_
- ⑫  $\frac{7}{6} =$  \_\_\_\_\_
- ⑬  $\frac{55}{4} =$  \_\_\_\_\_
- ⑭  $\frac{99}{5} =$  \_\_\_\_\_

Simplify these fractions.

- ⑮  $\frac{16}{20} =$  \_\_\_\_\_
- ⑯  $\frac{4}{128} =$  \_\_\_\_\_
- ⑰  $\frac{10}{15} =$  \_\_\_\_\_
- ⑱  $\frac{9}{81} =$  \_\_\_\_\_
- ⑲  $\frac{16}{20} =$  \_\_\_\_\_
- ⑳  $\frac{30}{445} =$  \_\_\_\_\_

Simplify these improper fractions and then convert them to mixed numbers.

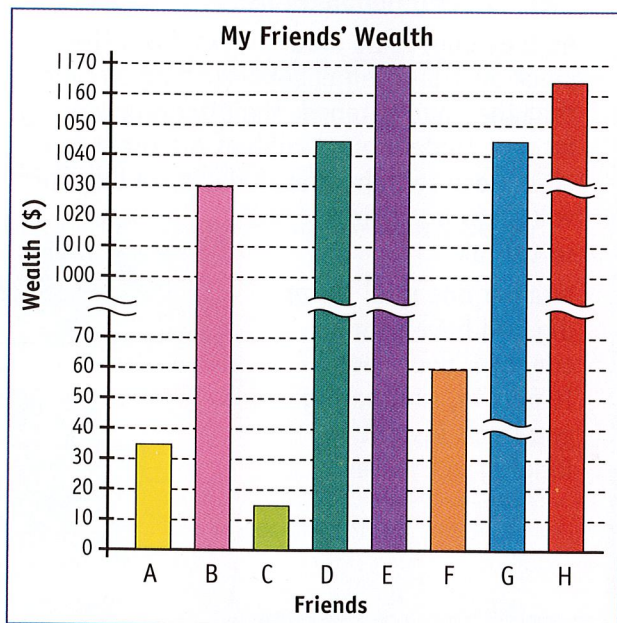
Improper fraction	Simplified fraction	Mixed number
$\frac{26}{8}$	= ⑲	= ⑳
$\frac{45}{10}$	= ㉓	= ㉔
$\frac{33}{22}$	= ㉕	= ㉖
$\frac{32}{6}$	= ㉗	= ㉘
$\frac{28}{12}$	= ㉙	= ㉚
$\frac{63}{18}$	= ㉛	= ㉜

Score 2 points for each correct answer!

SCORE /64 0-30 32-58 60-64

Graphs with broken axes

This bar graph displays My Friends' Wealth and it includes broken axes. Use the graph to answer the following questions.



- ① Why was this graph drawn with broken axes?  
\_\_\_\_\_
- ② If the graph didn't have broken axes, what would the broken bars look like?  
\_\_\_\_\_
- ③ What is wrong with bar B?  
\_\_\_\_\_
- ④ What is wrong with bar G?  
\_\_\_\_\_
- ⑤ What is wrong with bar H?  
\_\_\_\_\_
- ⑥ What is the value of bar A? \_\_\_\_\_
- ⑦ What is the value of bar E? \_\_\_\_\_
- ⑧ What is the value of bar D? \_\_\_\_\_
- ⑨ What is the approximate difference in value between bars A and C? \_\_\_\_\_
- ⑩ What is the approximate difference in value between bars D and E? \_\_\_\_\_
- ⑪ What is the difference in value between bars A and D? \_\_\_\_\_
- ⑫ What is the difference in value between bars C and E? \_\_\_\_\_

Score 2 points for each correct answer!

SCORE /24 0-10 12-18 20-24

Relating volume and capacity

Complete these conversions between capacity and volume.

Capacity	Volume
1 mL	= 1 cm <sup>3</sup>
①	= 5 cm <sup>3</sup>
2 L	= ②
③	= 5500 cm <sup>3</sup>
④	= 1 m <sup>3</sup>
1 mL	= 1000 mm <sup>3</sup>
⑤	= 3 500 mm <sup>3</sup>
750 L	= ⑥
⑦	= 1.75 m <sup>3</sup>
0.65 mL	= ⑧
⑨	= 75 000 cm <sup>3</sup>
1050 L	= ⑩
⑪	= 750 mm <sup>3</sup>
1000 L	= ⑫
1 000 000 mL	= ⑬

Score 2 points for each correct answer!

SCORE /26 0-10 12-20 22-26

Problem Solving

Reverse the simplification.

Improper fraction	Simplified fraction	Mixed number
①	= ② $\frac{\quad}{8}$	= 2 $\frac{3}{4}$
③	= ④ $\frac{\quad}{14}$	= 4 $\frac{1}{2}$
⑤	= ⑥ $\frac{\quad}{9}$	= 2
⑦	= ⑧ $\frac{\quad}{6}$	= 5 $\frac{1}{2}$
⑨	= ⑩ $\frac{\quad}{56}$	= 3

Use the bar graph in Statistics & Probability to answer the following questions.

If you had to construct a bar graph to display the following data, at which point along the Y axis would you place the breaks?

You need to give values for two points.

For example, the breaks in the graph My Friends' Wealth are at \$70 and \$1000.

- ⑪ Data for My Friends Marble Collection: Jill 3789, Kavinka 281, Mei 101, Bert 2912 and Freyja 112.  
\_\_\_\_\_
- ⑫ Data for Highways and Streets: Rathdown St 23 km, Eyre Hwy 1660 Km, Anne Beadell Highway 1325 km and Princes St 1.25 km.  
\_\_\_\_\_
- ⑬ Data for Heights of Animals: Mouse 4 cm, Snail 2.5 cm, Giraffe 5.85 m, Guinea pig 8 cm and Elephant 3.25 m.  
\_\_\_\_\_

Write the correct answers to these capacity and volume problems.

- ⑭ Jack had a one litre bottle of apple juice but he spilled half of it. How much has he got left, in cubic centimetres?  
\_\_\_\_\_
- ⑮ Jill had a 3000 cubic centimetre container filled with pear juice and she shared it equally among thirty children. How much in litres would each child get?  
\_\_\_\_\_
- ⑯ If Juan had a 4 cubic centimetre tube of blue face paint and he used a quarter of it on his face and another quarter on Julianna's face, how much has he got left, in millilitres?  
\_\_\_\_\_
- ⑰ If Jim had a one cubic metre bag full of mulch and he used three quarters of it on his garden, how much in litres did he use?  
\_\_\_\_\_
- ⑱ Josie used four cubic metres of sand to make sandpits. If she used 2000 litres on each sandpit, how many sandpits did she make?  
\_\_\_\_\_

