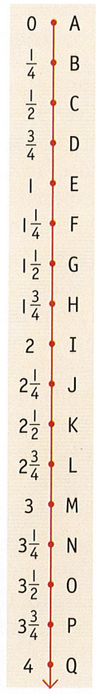
UNIT 5

Number & Algebra

ACMNA125

Comparing fractions

Use the fractions number line at the right to answer the following questions.



① Which point is $1\frac{1}{2}$ more than point D on the number line?

_____

② Which point is $1\frac{1}{2}$ less than point M?

_____

③ How much more than point F is point L?

_____

④ How much less than point G is point C?

_____

⑤ If point C was added on to point E, which point would they land on?

_____

⑥ If point D was subtracted from point K, which point would they land on?

_____

⑦ How far apart are points F and L?

_____

⑧ Which two points are $1\frac{3}{4}$ removed from point I?

_____

⑨ Which point is halfway between points D and L?

_____

⑩ Which point is at the three-quarter mark between points F and J?

_____

⑪ Which point is $2\frac{3}{4}$ more than point D?

_____

⑫ Which point is $2\frac{3}{4}$ less than point L?

_____

⑬ How much more than point F is point O?

_____

⑭ How much less than point N is point C?

_____

⑮ What point is three times more than point D?

_____

Score 2 points for each correct answer! SCORE /30 0-12 14-24 26-30

Statistics & Probability

ACMSP146

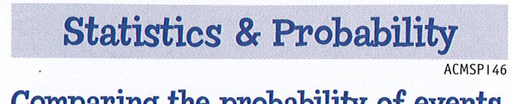
Comparing the probability of events

Label the events in order from 1 (most likely to happen) to 4 (least likely to happen).

① a ☐ Humans will one day land on Mars.
b ☐ Humans will one day land on the moon again.
c ☐ Humans will one day vacation on Mars.
d ☐ Humans will turn Mars into a jungle.

② a ☐ Aliens from another planet are secretly in control of the Earth.
b ☐ There are aliens from another planet observing us.
c ☐ Movies about aliens will always be popular with some people.
d ☐ Aliens from other planets will come to Earth one day.

Use this probability scale to answer the following questions.



What points along the probability scale would these events be? Write the matching letters in the boxes.

③ ☐ Next winter, it's going to rain four days in a row, three times.
④ ☐ Next summer, there are going to be at least four days of 40 °C or higher.
⑤ ☐ Next spring, no roses will bloom.
⑥ ☐ Next autumn, most deciduous trees will lose their leaves.
⑦ ☐ Next summer, there are going to be eight consecutive days of 40 °C or higher.
⑧ ☐ Next winter, it's going to rain at least ten days in a row, three times.
⑨ ☐ Late next spring, it's going to be hot enough to go swimming.

⑩ If this probability scale was a fractional probability scale, what fraction would be at the **even chance** point?

_____

⑪ If this probability scale was a percentage probability scale, what percentage would be at point C?

_____

Score 2 points for each correct answer! SCORE /22 0-8 10-16 18-22

Measurement & Geometry

ACMMG136

Converting metric units

The following table shows conversions for some units of volume.

Some spaces have been shaded grey because the values are too large or too small to be useful for this activity.

Fill in the spaces numbered from 1 to 7.

Millilitres (mL)	Litres (L)	Kilolitres (kL)	Megalitres (ML)
100	①	0.000 01	
1000	1	②	
③	20	0.02	0.000 02
80 000	80	④	0.000 08
	⑤	10	0.01
	1 000 000	1000	⑥
	500 000	⑦	0.5

Write the correct answers.

⑧ How many centimetres are in two and a half metres? _____

⑨ How many millimetres are in one and a quarter centimetres? _____

⑩ How many metres are in five and three-quarters kilometres? _____

⑪ How many kilometres are in ten thousand and sixty-five metres?

_____

⑫ How many milligrams are in one and a quarter grams? _____

⑬ How many grams are in two and a fifth kilograms? _____

⑭ How many kilograms are in half a tonne?

_____

Score 2 points for each correct answer! SCORE /28 0-12 14-22 24-28

Problem Solving

UNIT 5

ACMNA125, ACMMG136

Circle the correct answers.

① Jim had 80 baseball cards that he wanted to divide equally among his four friends.
What fraction of the cards would he give to each of them?
a $\frac{1}{80}$ b $\frac{1}{8}$ c $\frac{1}{4}$ d $\frac{1}{12}$

② Jim changed his mind and thought he'd give his best friend, Habib, twice as many cards as each of the other three friends.
What fraction of his cards would Jim give Habib?
a $\frac{2}{4}$ b $\frac{2}{3}$ c $\frac{2}{1}$ d $\frac{2}{5}$

③ On reflection, Jim decided he'd rather give Habib three times as many cards as each of the other three friends.
What fraction of his cards would Jim give Habib?
a $\frac{1}{2}$ b $\frac{5}{3}$ c $\frac{3}{4}$ d $\frac{4}{2}$

④ Finally Jim gave Habib half of his cards and he shared the rest equally among his other three friends.
What fraction of what was left of the cards after Habib had received his did each of Jim's other three friends get?
a $\frac{1}{4}$ b $\frac{3}{4}$ c $\frac{1}{3}$ d $\frac{2}{3}$

⑤ In question 4, what fraction of the original total number of cards did each of Jim's other three friends get?
a $\frac{1}{3}$ b $\frac{1}{4}$ c $\frac{1}{5}$ d $\frac{1}{6}$

Write the correct answers to these metric unit problems.

⑥ A flea moved five centimetres with each hop. At that rate, how many hops would it need to cover one metre?

_____

⑦ A kangaroo moved 10 metres with each jump. At that rate, how many jumps would it need to cover half a kilometre?

_____

⑧ A cat swallowed 10 millilitres of milk each time it lapped at its bowl. At that rate, how many laps would it need to lap up a quarter of a litre of milk?

_____

⑨ A lion swallowed 50 millilitres of water each time it lapped water out of a river. At that rate, how many laps would it need to lap up two litres of water?

_____

TERM 1 MATHS

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