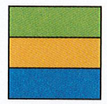
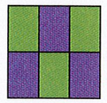
Number & Algebra

ACMNA125

Comparing fractions with related denominators

Use these diagrams to answer the following questions.

A  B  C 

D  E  F 

① Which statement about the way these shapes are coloured is totally correct?

a A = $\frac{1}{2}$, B = $\frac{1}{4}$, C = $\frac{1}{4}$, D = $\frac{1}{5}$

b B = $\frac{1}{3}$, C = $\frac{1}{2}$, E = $\frac{1}{6}$, F = $\frac{1}{8}$

c A = $\frac{1}{2}$, C = $\frac{1}{3}$, D = $\frac{1}{5}$, E = $\frac{1}{6}$

d A = $\frac{1}{2}$, B = $\frac{1}{3}$, D = $\frac{1}{5}$, E = $\frac{1}{6}$

Write the correct answers.

② How many parts of C are equal to one part of A?

_____

③ How many parts of F are equal to one part of A?

_____

④ How many parts of A are equal to five parts of D?

_____

⑤ How many parts of F are equal to two parts of C?

_____

⑥ How many parts of E are equal to two parts of B?

_____

Which is larger? Circle the correct answer.

⑦ a one part of A
b two parts of D

⑧ a two parts of C
b two parts of E plus one part of F

⑨ a one part of B?
b three parts of F

Write <, > or = to make the statements true.

⑩ $\frac{3}{4}$ ___ $\frac{6}{8}$ ⑬ $\frac{1}{4}$ ___ $\frac{2}{5}$

⑪ $\frac{4}{5}$ ___ $\frac{2}{2}$ ⑭ $\frac{4}{5}$ ___ $\frac{2}{3}$

⑫ $\frac{2}{3}$ ___ $\frac{4}{6}$

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

Statistics & Probability

ACMSP144

Games of chance

The Plains Cree people in North America play a game called **Kutepuchkunuputuk**. They get an odd number of sticks. In secret, one player puts the sticks in two groups so that one group has one stick more than the other group. The other player looks at the two groups and guesses which has more sticks.

Write or circle the correct answers.

① **Is Kutepuchkunuputuk entirely a game of chance?**
a yes b no

② **Could the eyesight of the players affect the outcome of the game?**
a yes b no

③ **If Kutepuchkunuputuk was entirely a game of chance, the second player has a 0.5 chance of guessing correctly.**
What is this probability as a fraction?

_____

④ **To win Kutepuchkunuputuk, a player has to guess correctly four times in a row.**
If they were playing entirely by chance, what chance does a player have of winning?
a $\frac{1}{4}$ b $\frac{1}{8}$ c $\frac{1}{16}$ d $\frac{1}{20}$

⑤ **If a player makes two correct consecutive guesses, what is that player's chance then?**
a 20% b 25% c 40% d 45%

⑥ **If a player makes three correct consecutive guesses, what is their chance then?**
a 0.333 b 0.125 c 0.103 d 0.03

Score 2 points for each correct answer! SCORE /12 0-4 6-8 10-12

TARGETING HOMEWORK 6 © PASCAL PRESS ISBN 9781925490312

Measurement & Geometry

ACMMG136

Converting metric units

The following table shows conversions for some units of length.

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 8.

Millimetres (mm)	Centimetres (cm)	Metres (m)	Kilometres (km)
100	10	①	
5	②	0.005	
③	3	0.03	
25	2.5	④	
⑤	400	4	0.004
5250	⑥	5.25	0.005 25
	200 000	2000	⑦
	125 000	1250	⑧

The following table shows conversions for some units of mass (weight).

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 9 to 15.

Milligrams (mg)	Grams (g)	Kilograms (kg)	Tonnes (t)
25	⑨		
⑩	5	0.005	
1300	1.3	⑪	
10 000 000	⑫	10	0.01
50 000 000	50 000	50	⑬
	1 000 000	⑭	1
		1200	⑮

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

Problem Solving

ACMNA125, ACMSP144

Use this rod to answer the following questions.

① **What fraction of the rod is coloured yellow?**
a $\frac{2}{12}$ b $\frac{1}{2}$ c $\frac{6}{24}$ d $\frac{2}{24}$

② **What fraction of the rod is coloured blue?**
a $\frac{1}{4}$ b $\frac{2}{12}$ c $\frac{6}{12}$ d $\frac{2}{24}$

③ **What fraction of the rod is coloured red?**
a $\frac{1}{4}$ b $\frac{1}{3}$ c $\frac{3}{21}$ d $\frac{1}{8}$

④ **What fraction of the rod is coloured green?**
a $\frac{1}{9}$ b $\frac{3}{12}$ c $\frac{3}{9}$ d $\frac{1}{8}$

⑤ **What fraction of the rod is coloured white?**
a $\frac{1}{12}$ b $\frac{1}{24}$ c $\frac{1}{1}$ d 1

⑥ **Which two colours combined make up half of the rod?**

_____

⑦ **Which three colours combined make up half of the rod?**

_____

⑧ **Which two colours combined make up $\frac{1}{6}$ of the rod?**

_____

Write the correct answers.

⑨ A teacher had five different coloured pieces of paper. She told Samuel to close his eyes while she held up one of the papers.
What chance did Samuel have of guessing the right colour? Answer as a fraction.

_____

⑩ If Samuel was wrong and the teacher asked him to guess again, what chance did he have then? Answer as a decimal.

_____

⑪ How many guesses would Samuel have to make before he could be certain that he would get it right on his next guess?

_____