MATHEMATICS

Year 6/Primary 7 Ext.

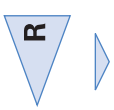
PRIM-ED PUBLISHING

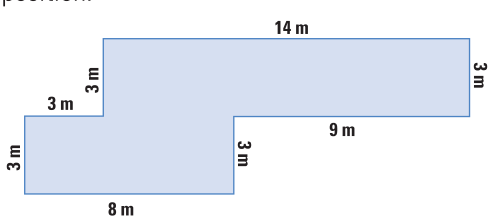
www.prim-ed.co.uk

020 3773 9620

PARENT PACK

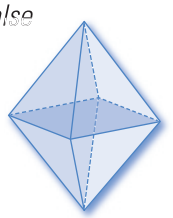
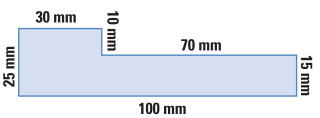
MONDAY

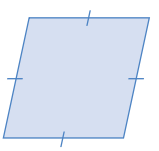
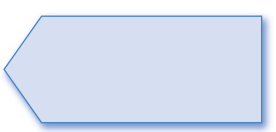
1. 0.6 ÷ 0.2 =
2. 0.96, 0.97, 0.98, 0.99,
3. What would be the perimeter of a regular hexagon with 60-mm sides? mm
4. $^{-}7 + {}^{+}3$ =
5. The total price of four pizzas is £24. What is the average cost of a pizza? £
6. $^{1}/_{2} < {}^{1}/_{10}$ ☐ *true* ☐ *false*
7. 8 L 253 mL = $8^{253}/_{1000}$ L = 8. litres
8. 7 – 0.04 =
9. Which digit in the decimal 4.705 is the thousandth?
10. 20% = $^{2}/_{10}$ = 0.
11. Is the formula: **area = l + w** correct?
12. 5^2 =
13. A cube has 2-cm by 2-cm faces. What is the cube's surface area? cm^2
14. Write three capital letters that are symmetrical.
15. 6% = 0.
16. Round 3.06 (nearest tenth).
17. 

Spin the triangle 450° anticlockwise. Draw its new position.
18. 

Area = m^2
19. Perimeter = m
20. Tick which would be best to measure the width of a book.
☐ *ruler* ☐ *trundle wheel* ☐ *metre stick*

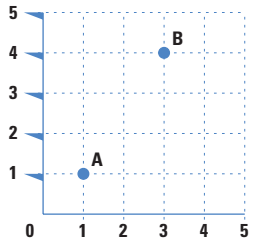
TUESDAY

1. $^{3}/_{4} > {}^{1}/_{2}$ ☐ *true* ☐ *false*
2. An octahedron has: faces
edges
vertices

3. 0.9 ÷ 0.3 =
4. $^{-}4 + {}^{+}9$ =
5. 75 000, 150 000, 225 000,
6. 5 L 450 mL = $5^{450}/_{1000}$ L = 5. litres
7. What do we call an angle that is 90°?
8. What is the perimeter? mm


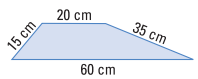
9. 66% = $^{2}/_{3}$ = 0.
10. Name this shape.

11. 6^2 =
12. Is the formula: **area = l – w** correct?
13. Will a hexagon and a square tessellate together?
14. A cube has 3-cm by 3-cm faces. What is the cube's surface area? cm^2
15. Draw the axis of symmetry on the irregular pentagon.

16. Round 6.14 (nearest tenth).
17. Tick which would be best to measure the height of your teacher.
☐ *ruler* ☐ *trundle wheel* ☐ *metre stick*
18. 9% = 0.
19. The place value of 9 in 952 075 is .
20. Are 18 and 81 both composite numbers?

WEDNESDAY

1. 0.75 ÷ 0.25 =
2. Write the co-ordinates of point A.
3. Write the co-ordinates of point B.

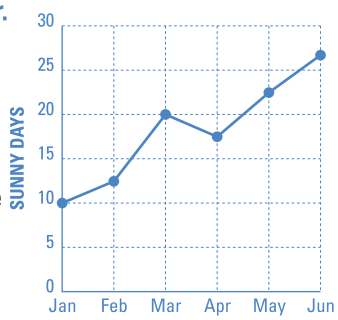


4. 1.07, 1.08, 1.09,



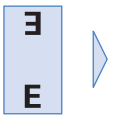
5. What is the perimeter? cm
6. 8^2 =
7. What do we call an angle that is between 0° and 90°?
8. 37.5% = $^3/_8$ = 0.
9. Round 4.378 (nearest tenth).
10. A cube has 4-cm by 4-cm faces. What is the cube's surface area? cm^2
11. 110% = (decimal)

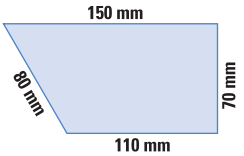
The graph shows the number of sunny days for the first six months of a year.



12. Which month had 13 sunny days?
13. Which month had the most sunny days?
14. Which month had the least sunny days?
15. How many more sunny days had March than January?
16. Which month had fewer sunny days than you might expect?
17. Which month had 23 sunny days?
18. Which month would have the greatest chance of sunny days if you went for a picnic?
19. Tick which would be best to measure the length of your foot.
    ☐ *ruler* ☐ *trundle wheel* ☐ *metre stick*
20. Which digit in the decimal 4.705 is the tenth?

THURSDAY

1. $^{-}5 + {}^{+}3$ =
2. The total cost of 5 drinks is £6.25. What is the average cost of a drink? £
3. 
   Turn this rectangle 90° clockwise and draw the new position.
4. 0.9 ÷ 0.15 =
5. 50, 5, 100, 10, 200,
6. 7 L 945 mL = $7^{945}/_{1000}$ L = 7. litres
7. Which digit in the decimal 4.705 is the hundredth?
8. 11^2 =
9. 5.5 – 0.9 =
10. What is the perimeter? mm



11. $^3/_5 < {}^1/_2$ ☐ *true* ☐ *false*
12. What do we call an angle that is between 90° and 180°?
13. What is the probability of choosing a head on a one coin toss? in
14. 80% = $^8/_{10}$ = 0.
15. Is the formula: **Area = L x W** correct?
16. 1 = %
17. A cube has 5-cm by 5-cm faces. What is the cube's surface area? cm^2
18. Round 2.056 (nearest tenth).
19. How many degrees make up a square? °
20. Will a parallelogram and an isosceles triangle tessellate together?

MONDAY

1. What do we call an angle that is between 180° and 360°?
2. 2^5 =
3. 0.6 ÷ 0.15 =
4. $6^1/_4$ = (improper fraction)
5. Write ten million, five hundred and twelve thousand and fifteen as a numeral.
6. 8% of £10.00 = £
7. What is the place value of 4 in 2.4 million?
8. The total cost of 6 drinks is £7.20. What is the average cost of a drink? £
9. What is the angle between the hands on an analogue clock displaying 9 o'clock? °
10. Which is a composite number?
    ☐ *15* ☐ *11*
11. 80 x 30 = 24 x y *so* y =
12. $^4/_5 + 2^4/_5$ =
13. 
    Draw to show a 270° turn clockwise.
14. Round 15.6073 to 3 decimal places.
15. Write the formula to work out an area:
    a = **x**
16. Change $2^4/_7$ to an improper fraction.
17. Tick which scales would be best to weigh a banana.
    ☐ *kitchen scales* ☐ *bathroom scales*
18. What is the volume of a box 40 cm by 30 cm by 40 cm?
    cm^3
19. $0.7 < {}^8/_{10}$ ☐ *true* ☐ *false*
20. If there are ¥116 to £1.00, how many pounds would you get for ¥580?

TUESDAY

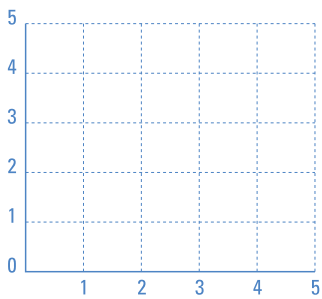
1. Simplify $^{18}/_{24}$.
2. Write 3.65 million as a numeral.
3. How much are the wages if you pay time and a half for 4 hours (normal rate £10.00 per hour)?
   £
4. $7^3/_4$ = . (decimal)
5. What do we call an angle that is 90°?
6. 6.05 km = m
7. $^-7 + {}^+3$ =
8. 9 L 45 mL = $9^{45}/_{1000}$ L = 9. litres
9. Tick which would be best to measure the length of the street:
   ☐ *ruler* ☐ *trundle wheel* ☐ *metre stick*
10. How far do you go in an hour if you take 5 minutes to go 6 km? km
11. Which digit in the decimal 0.527 is the tenth?
12. Write $^{49}/_6$ as a mixed number.
13. Round 21.3689 to 3 decimal places.
14. What is the diameter of a circular driveway with a 10 m radius? m
15. A shape has six 2-cm by 3-cm faces. What is the shape's surface area? cm^2
16. What is the average of these cricket scores?
    8, 15, 8, 15, 0
17. 5000 ÷ (50 x 10^2) =
18. Are 210 and 120 both prime numbers?
19. $3.3 > 3^1/_5$ ☐ *true* ☐ *false*
20. Tick which scales would be best to weigh a dog.
    ☐ *kitchen scales* ☐ *bathroom scales*

WEDNESDAY

1. If there are ¥116 to £1.00, how many pounds would you get for ¥232?
2. Write 8.2 million as a numeral.
3. Simplify $^{15}/_{18}$.
4. 7.092 L = mL
5. What speed are you travelling if your bike does 1 km in 4 minutes? km/hr
6. $9^{4}/_{5}$ = (improper fraction)
7. 0.9 ÷ 0.3 =
8. $^{-}5 + {}^{+}9$ =
9. The total cost of 8 cakes is £4.40. What is the average cost of a cake? p
10. Draw a net of a cube.
11. Change $5^{3}/_{8}$ to an improper fraction.
12. Tick which would be best to measure the height of a door.
    ☐ *ruler* ☐ *trundle wheel* ☐ *metre stick*
13. Which digit in the decimal 5.026 is the thousandth?
14. 87.5% = $^{7}/_{8}$ = 0.
15. 4 x y = 280 *so* y =
16. Write the formula to work out an area:

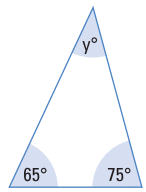
    a = l w
17. A shape has six 2-cm by 4-cm faces. What is the shape's surface area? cm^2
18. Write in ascending order.

    1% **0.1** **$^{5}/_{10}$** **0.99**
19. Draw a dot at co-ordinate (2,3) and label it 'A'.
20. Draw a dot at co-ordinate (5,4) and label it 'B'.

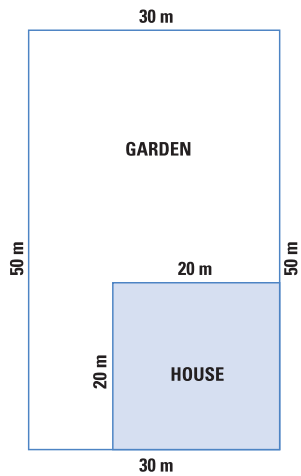


THURSDAY

1. What is the probability of being born on a Sunday? in
2. $^{-}15 + {}^{-}2$ =
3. What do we call an angle that is between 0° and 90°?
4. 10 L 8 mL = $10^{8}/_{1000}$ L = 10. litres
5. Which digit in the decimal 5.234 is the hundredth?
6. 62.5% = $^{5}/_{8}$ = 0.
7. Write five million and five as a numeral.
8. Halve 8.5.
9. 1800, 2600, 3400,
10. Draw the net of a cylinder.
11. What is the ratio of boys to girls if there are 8 boys and 24 girls?
12. 6030 mm = m
13. 6.9 – 1.1 =
14. y =



15. Round 12.5467 to 3 decimal places.
16. Tick which scales would be best to weigh an apple.
    ☐ *kitchen scales* ☐ *bathroom scales*
17. 85 000, 100 000, 115 000,
18. The area of the house is 400 m^2. What is the area of the garden? m^2
19. The perimeter of the house is 80 m. What is the perimeter of the garden? m
20. 1.5 ÷ 0.3 =



FRIDAY TEST *Week 31*

1. $0.8 \div 0.2 =$ ____
2. $^{-}6 + {}^{+}9 =$ ____
3. The total cost of 5 pizzas is £25.50. What is the average cost of a pizza?

   £ ____
4. $^{1}/_{10} > {}^{1}/_{3}$

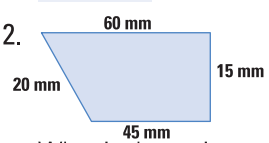
   ☐ *true* ☐ *false*
5. 4 L 295 mL = $4^{295}/_{1000}$ L

   = 4.____ litres
6. Which digit in the decimal 5.052 is the tenth?

   ____
7. 0.1 = ____ %
8. 60 000, 150 000, 240 000, 330 000,

   ____
9. 60% = $^{6}/_{10}$ = 0.____
10. What is the perimeter of a regular pentagon with 45-mm sides?

    ____ mm
11. Write a number that is symmetrical.

    ____
12. 

    What is the perimeter of this quadrilateral?

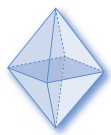
    ____ mm
13. Area of a square = L x W

    ☐ *true* ☐ *false*
14. A cube has 2-cm by 2-cm faces. What is the cube's surface area?

    ____ cm^2
15. Tick which would be the best to measure the length of a worm.

    ☐ *ruler*
    ☐ *trundle wheel*
    ☐ *metre stick*
16. An octahedron has

    ____ *faces*
    ____ *edges*
    ____ *vertices*



17. What do we call an angle that is between 180° and 360°?

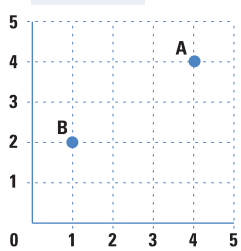
    ____
18. The place value of 5 in 450 277 is

    ____
19. 

    Rotate this shape 450° anticlockwise and draw its new position.
20. Will a trapezium tessellate?

    ____
21. Write the co-ordinates of point A.

    ____



22. Write the co-ordinates of point B.

    ____
23. Round 6.464 (nearest tenth). ____
24. How many degrees make up a square?

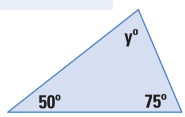
    ____ °
25. Are 150 and 15 both composite numbers?

    ____

FRIDAY TEST *Week 32*

1. The place value of 4 in 4 378 200 is

   ____.
2. Simplify $^{10}/_{12}$. ____
3. $10^2 - 3^2 =$ ____
4. $y^o =$ ____ °



5. Rotate 450° clockwise.

6. What do we call the angle that is between 180° and 360°?

   ____
7. 6000, 12 000, 24 000, 48 000,

   ____
8. (y + 50) = (80 + 90)

   so y = ____
9. $1.6 \div 0.4 =$ ____
10. $3^1/_3 + 3^2/_3 =$

    ____
11. Round 25.0917 to 3 decimal places.

    ____
12. Write the formula to work out area of a rectangle.

    a = ____ x ____
13. Tick which scales would be best to weigh a child.

    ☐ *kitchen*
    ☐ *bathroom*
14. The total cost of 9 cakes is £3.15. What is the average cost of a cake?

    ____ p
15. $9^2 =$ ____
16. $^{-}3 + {}^{+}7 =$ ____
17. 6 x y = 360

    so y = ____
18. 2075 mm =

    ____ m
19. 

    Enlarge this line by 4:1.

    ____ mm
20. If there are ¥116 to £1.00, how many pounds would you get for ¥580?

    ____
21. What is the area of a rectangular field 100 m by 15 m?

    ____ m^2
22. 5 L 25 mL = $5^{25}/_{1000}$ L =

    5.____ litres
23. Which digit in the decimal 2.347 is the hundredth?

    ____
24. What speed would you be travelling on your bike if it was doing $7^1/_2$ km every 30 minutes?

    ____ km/hr
25. A shape has six 2-cm by 5-cm faces. What is the shape's surface area?

    ____ cm^2

NEW WAVE MENTAL MATHS Year 6/Primary 7 Ext. Book – Answers

WEEK 31 pages 62 – 63

Monday

1. 3
2. 1
3. 360 mm
4. –4
5. £6.00
6. false
7. 8.253
8. 6.96
9. 5
10. 0.2
11. no
12. 25
13. 24 cm^3
14. Teacher check
15. 0.06
16. 3.1
17. 
18. 66 m^2
19. 46 m
20. ruler

Tuesday

1. true
2. 8, 12, 6
3. 3
4. +5
5. 300 000
6. 5.45 litres
7. right angle
8. 250 mm
9. 0.66
10. rhombus
11. 36
12. no
13. yes
14. 54 cm^3
15. Teacher check
16. 6.1
17. metre stick
18. 0.09
19. 900 000
20. yes

Wednesday

1. 3
2. 1, 1
3. 3, 4
4. 1.1
5. 130 cm
6. 64
7. acute angle
8. 0.375
9. 4.4
10. 96 cm^3
11. 1.1
12. February
13. June
14. January
15. 10
16. April
17. May
18. June
19. ruler
20. 7

Thursday

1. –2
2. £1.25
3. 
4. 6
5. 20
6. 7.945
7. 0
8. 121
9. 4.6
10. 410
11. false
12. obtuse
13. 1 in 2
14. 0.8
15. yes
16. 100%
17. 150 cm^3
18. 2.1
19. 360°
20. yes

Friday Test page 97

1. 4
2. +3
3. £5.10
4. false
5. 4.295
6. 0
7. 10%
8. 420 000
9. 0.6
10. 225 mm
11. Teacher check
12. 140 mm
13. true
14. 24 cm^3
15. ruler
16. 8, 12, 6
17. reflex
18. 50 000
19. 
20. yes
21. 4, 4
22. 1, 2
23. 6.5
24. 360°
25. yes

WEEK 32 pages 64 – 65

Monday

1. reflex
2. 32
3. 4
4. $^{25}/_{4}$
5. 10 512 015
6. 80p
7. 100 000
8. £1.20
9. 90°
10. 15
11. 100
12. $3^{3}/_{5}$
13. 
14. 15.607
15. a = l x w
16. $^{18}/_{7}$
17. kitchen
18. 48 000 cm^3
19. true
20. £5.00

Tuesday

1. $^{3}/_{4}$
2. 3 650 000
3. £60.00
4. 7.75
5. right
6. 6050 m
7. –4
8. 9.045
9. trundle wheel
10. 72 km
11. 5
12. $8^{1}/_{6}$
13. 21.369
14. 20 m
15. 36 cm^3
16. 9.2
17. 1
18. no
19. true
20. bathroom

Wednesday

1. £2.00
2. 8 200 000
3. $^{5}/_{6}$
4. 7092 mL
5. 15 km/hr
6. $^{49}/_{5}$
7. 3
8. +4
9. 55p
10. Teacher check
11. $^{43}/_{8}$
12. metre stick
13. 6
14. 0.875
15. 70
16. a = l x w
17. 48 cm^3
18. 1%, 0.1, $^{5}/_{10}$, 0.99
19. Teacher check
20. Teacher check

Thursday

1. 1 in 7
2. –17
3. acute
4. 10.008
5. 3
6. 0.625
7. 5 000 005
8. 4.25
9. 4200
10. 
11. 8:24 or 1:3
12. 6.03 m
13. 5.8
14. 40°
15. 12.547
16. kitchen
17. 130 000
18. 1 100 m^2
19. 160 m
20. 5

Friday Test page 97

1. 1 000 000
2. $^{5}/_{6}$
3. 91
4. 55°
5. 
6. reflex
7. 96 000
8. 120
9. 4
10. 7
11. 25.092
12. l x w
13. bathroom
14. 35p
15. 81
16. +4
17. 60
18. 2.075 m
19. 40 mm
20. £5.00
21. 1500 m^2
22. 5.025
23. 4
24. 15 km/hr
25. 60 cm^3

WEEK 33 pages 66 – 67

Monday

1. 1 300 000
2. 3
3. new line = 4 cm
4. yes
5. kitchen
6. 5.004
7. $^{1}/_{8}$
8. 81
9. 0%
10. 9
11. 100 000
12. Teacher check
13. Teacher check
14. 0.8
15. 54 cm^3
16. 350 m^2
17. 88 m
18. £12.00
19. 15.04
20. 7205 g

Tuesday

1. £10.00
2. 35 m^2
3. 8, 12, 6
4. 6 090 000
5. 87 000
6. 14.972
7. 5
8. 21
9. 
10. trundle wheel
11. $^{1}/_{4}$
12. 50%
13. £45.00
14. 48 cm^3
15. Teacher check
16. 1000
17. $5^{1}/_{2}$
18. £30.00
19. 107 cm
20. $^{1}/_{4}$, $^{1}/_{2}$, $^{3}/_{4}$, $^{7}/_{8}$

Wednesday

1. 2 750 000
2. 21.588
3. 5
4. $4^{1}/_{2}$
5. 15 mm
6. –5 hours
7. no
8. kitchen
9. $^{1}/_{8}$
10. 36 cm^3
11. 11, 13, 17 and 19
12. £120.00
13. 41
14. 8005 mm

CHALLENGER SERIES

Date: _____

Name: _____

Level HH — Almost Extreme

1. 2 x 2 x 2 = _____
2. 7 x 3 = _____
3. 3 x 3 x 3 = _____
4. 4 x 8 = _____
5. 3 x 6 x 4 = _____
6. 2 x 5 x 3 = _____
7. 4 x 7 x 2 = _____
8. 2 x 6 x 4 = _____
9. 3 x 2 x 3 = _____
10. 4 x 9 = _____
11. 10 x 10 = _____
12. 9 x 0 x 2 = _____
13. 4 x 1 = _____
14. 6 x 6 x 2 = _____
15. 7 x 4 x 3 = _____
16. 3 x 9 = _____
17. 2 x 2 x 3 = _____
18. 4 x 2 x 2 = _____
19. 3 x 4 x 3 = _____
20. 6 x 8 = _____
21. 7 x 7 = _____
22 6 x 4 x 2 = _____
23. 1 x 1 x 12 = _____
24. 1 x 10 x 5 = _____
25. 3 x 9 x 4 = _____
26. 3 x 12 x 4 = _____
27. 11 x 5 x 2 = _____
28. 6 x 6 = _____
29. 11 x 3 x 3 = _____
30. 8 x 7 = _____
31. 11 x 10 = _____
32. 11 x 3 x 4 = _____
33. 5 x 5 = _____
34. 2 x 1 x 1 = _____
35. 10 x 4 x 3 = _____
36. 8 x 5 = _____
37. 9 x 4 x 3 = _____
38. 12 x 6 x 2 = _____
39. 2 x 0 x 2 = _____
40. 4 x 6 x 3 = _____
41. 9 x 9 = _____
42. 2 x 7 = _____
43. 8 x 2 x 2 = _____
44. 7 x 3 x 2 = _____
45. 4 x 6 = _____
46. 2 x 9 x 5 = _____
47. 5 x 8 x 2 = _____
48. 10 x 1 x 10 = _____
49. 6 x 3 x 4 = _____
50. 4 x 8 x 3 = _____

Your Score: _____

CHALLENGER SERIES

Date: _____

Name: _____

Level HH — Almost Extreme

1. 2 x 2 x 2 = _____
2. 7 x 3 = _____
3. 3 x 3 x 3 = _____
4. 4 x 8 = _____
5. 3 x 6 x 4 = _____
6. 2 x 5 x 3 = _____
7. 4 x 7 x 2 = _____
8. 2 x 6 x 4 = _____
9. 3 x 2 x 3 = _____
10. 4 x 9 = _____
11. 10 x 10 = _____
12. 9 x 0 x 2 = _____
13. 4 x 1 = _____
14. 6 x 6 x 2 = _____
15. 7 x 4 x 3 = _____
16. 3 x 9 = _____
17. 2 x 2 x 3 = _____
18. 4 x 2 x 2 = _____
19. 3 x 4 x 3 = _____
20. 6 x 8 = _____
21. 7 x 7 = _____
22 6 x 4 x 2 = _____
23. 1 x 1 x 12 = _____
24. 1 x 10 x 5 = _____
25. 3 x 9 x 4 = _____
26. 3 x 12 x 4 = _____
27. 11 x 5 x 2 = _____
28. 6 x 6 = _____
29. 11 x 3 x 3 = _____
30. 8 x 7 = _____
31. 11 x 10 = _____
32. 11 x 3 x 4 = _____
33. 5 x 5 = _____
34. 2 x 1 x 1 = _____
35. 10 x 4 x 3 = _____
36. 8 x 5 = _____
37. 9 x 4 x 3 = _____
38. 12 x 6 x 2 = _____
39. 2 x 0 x 2 = _____
40. 4 x 6 x 3 = _____
41. 9 x 9 = _____
42. 2 x 7 = _____
43. 8 x 2 x 2 = _____
44. 7 x 3 x 2 = _____
45. 4 x 6 = _____
46. 2 x 9 x 5 = _____
47. 5 x 8 x 2 = _____
48. 10 x 1 x 10 = _____
49. 6 x 3 x 4 = _____
50. 4 x 8 x 3 = _____

Your Score: _____

TIMES TABLE CHALLENGE - Prim-Ed Publishing - 28

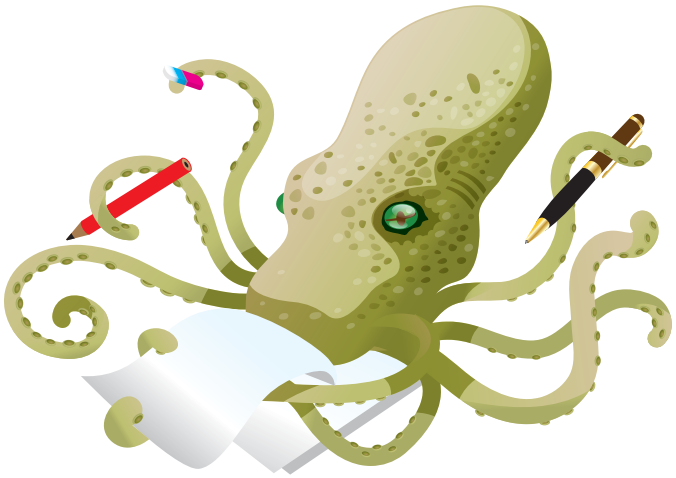
TIMES TABLE

Answers

	P	Q	R	S	T	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ
1	16	99	9	24	12	6	8	9	14	12	45	21	8	27	24
2	12	40	9	33	30	0	14	18	3	10	16	12	21	20	32
3	5	33	14	0	4	4	0	15	16	21	12	20	27	1	70
4	9	50	12	36	24	9	10	2	15	24	15	8	32	12	0
5	8	11	50	60	8	8	8	12	20	18	8	18	72	16	28
6	7	20	77	12	35	7	70	20	6	8	60	10	30	24	30
7	0	44	100	77	0	4	6	21	40	20	18	15	56	18	48
8	45	10	6	48	25	12	16	30	18	30	32	18	48	96	54
9	10	30	21	99	28	10	18	10	0	45	4	12	18	32	120
10	24	88	16	55	1	16	20	4	18	77	12	0	36	45	63
11	16	60	27	84	18	10	12	35	0	16	27	100	100	70	132
12	30	55	24	22	16	12	27	18	9	21	10	0	0	0	96
13	3	80	4	110	36	15	10	5	5	24	27	12	4	72	18
14	32	66	24	11	20	60	18	16	35	36	24	8	72	28	12
15	24	70	40	72	16	18	100	40	25	100	36	40	84	90	96
16	77	22	36	44	35	2	9	12	18	0	20	16	27	110	60
17	15	80	18	96	22	20	30	30	32	12	100	18	12	54	120
18	28	60	28	0	27	40	28	0	21	27	32	45	16	30	60
19	6	77	6	88	14	0	36	49	100	24	36	24	36	108	84
20	80	10	32	120	40	33	21	27	24	14	56	36	48	48	36
21	44	66	15	0	9	18	4	24	45	9	24	55	49	8	72
22	49	100	8	96	70	10	55	45	64	56	36	1	48	54	108
23	4	20	49	66	132	30	24	16	48	32	24	36	12	48	48
24	88	50	18	108	24	14	0	48	42	121	28	42	50	110	108
25	36	0	121	11	100	16	24	28	110	72	48	27	108	121	99
26	64	110	132	84	49	12	90	56	0	54	45	30	144	120	81
27	100	11	25	22	32	22	24	36	28	28	40	42	110	132	54
28	60	132	63	144	6	55	32	70	99	48	55	121	36	144	96
29	110	70	11	33	4	0	16	54	80	108	21	50	99	72	72
30	54	22	20	132	36	20	18	14	4	36	0	48	56	96	144
31	21	77	48	44	40	10	12	55	24	48	24	25	110	96	132
32	18	0	45	110	54	44	25	8	56	81	36	56	132	63	8
33	42	121	30	66	121	16	35	36	22	144	42	36	25	55	64
34	24	90	0	121	20	50	24	24	12	49	25	54	2	40	45
35	120	0	42	120	21	9	3	25	40	54	36	49	120	60	72
36	25	40	64	55	0	6	88	63	81	18	30	45	40	54	84
37	36	90	36	36	64	12	0	10	48	72	49	28	108	84	60
38	72	120	42	12	77	15	22	40	49	96	54	80	144	132	90
39	35	30	56	99	28	6	10	24	16	0	88	0	0	60	110
40	12	55	81	24	108	18	16	32	0	88	80	32	72	48	54
41	20	120	70	0	56	16	24	1	24	84	24	81	81	108	40
42	63	33	16	60	10	30	40	42	56	25	33	28	14	36	48
43	18	132	96	88	81	8	36	0	30	56	48	50	32	84	108
44	48	44	132	48	48	20	45	30	88	44	24	24	42	81	72
45	0	99	54	72	36	14	20	8	63	110	64	64	24	108	48
46	40	110	10	132	132	18	25	36	36	48	27	110	90	72	36
47	96	0	72	96	15	0	28	44	24	60	0	16	80	84	84
48	99	88	21	77	144	30	21	21	54	63	32	56	100	72	10
49	84	44	36	84	96	25	36	24	32	42	99	54	72	120	16
50	56	132	72	108	63	12	35	42	72	72	56	12	96	108	36

CHALLENGE

SUBTRACTION WITH ZEROS – DON'T BE HEROES



7000 - 5675	6000 - 4787		
10 000 - 7 649	4000 - 1267		
700 000 - 78 605	600 000 - 22 787	100 000 - 84 919	40 100 - 22 658
8100 - 5488	6100 - 3387	10 100 - 3 349	4100 - 1727
7001 - 3542	6001 - 4465	10 001 - 2 765	4001 - 3157
7010 - 3485	6010 - 5697	10 010 - 2 259	4010 - 2637

Content description: Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers (ACMNA123)

ADDITION, ADDITION, ADDITION

3999 + 1431	4999 + 4323	19 999 + 3 441	4999 + 1243
37 777 + 32 471	47 777 + 22 323	177 777 + 24 111	4 717 + 22 412
2188 + 1422	5864 + 3323	21 189 + 3 341	4167 + 1323
3991 + 3142	8991 + 4441	13 491 + 2 341	5891 + 3113
22 919 + 3 421	6459 + 1413	21 319 + 2 211	6319 + 2433

Content description: Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers (ACMNA123)

MULTIPLICATION WITH ZEROS

Content description: Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers (ACMNA123)

3981
x 700

7485
x 400

19 549
x 300

4999
x 600

36 165
x 4 000

65 499
x 7 000

13 345
x 3 000

6719
x 2000

2449
x 40

6619
x 50

15 567
x 30

4883
x 80

3561
x 300

4281
x 400

12 351
x 700

30 451
x 5 000

3219
x 80

46 833
x 40

14 519
x 60

78 819
x 20

1. Add the fractions together to create a new fraction.

(a)

	$\frac{3}{10}$	$\frac{9}{10}$	$\frac{5}{10}$	$\frac{6}{10}$
$\frac{4}{5}$				
$\frac{1}{5}$				
$\frac{2}{5}$			$\frac{9}{10}$	
$\frac{3}{5}$				

(b)

	1	$\frac{3}{4}$	$\frac{1}{4}$	$\frac{1}{2}$
1				
$\frac{3}{4}$				
$\frac{1}{4}$				
$\frac{1}{2}$				

(c)

	1	$\frac{1}{6}$	$\frac{3}{6}$	$\frac{5}{6}$
1				
$\frac{1}{6}$				
$\frac{3}{6}$				
$\frac{5}{6}$				

2. **(a)** $\frac{6}{8} - \frac{1}{4} =$ _____ **(b)** $\frac{4}{5} - \frac{1}{6} =$ _____ **(c)** $\frac{1}{4} - \frac{1}{5} =$ _____

(d) $\frac{8}{12} - \frac{1}{6} =$ _____ **(e)** $\frac{11}{16} - \frac{4}{8} =$ _____ **(f)** $\frac{11}{20} - \frac{1}{4} =$ _____

(g) $\frac{1}{2} - \frac{2}{5} =$ _____ **(h)** $\frac{3}{4} - \frac{5}{8} =$ _____ **(i)** $\frac{9}{10} - \frac{1}{2} =$ _____

(j) $\frac{7}{8} - \frac{1}{2} =$ _____

3. **(a)** $\frac{7}{9} - \frac{1}{3} =$ _____ **(b)** $\frac{12}{9} - \frac{5}{9} =$ _____ **(c)** $\frac{4}{6} - \frac{1}{12} =$ _____

(d) $\frac{7}{12} - \frac{1}{6} =$ _____ **(e)** $\frac{9}{16} - \frac{1}{8} =$ _____ **(f)** $\frac{19}{20} - \frac{3}{4} =$ _____

(g) $1\frac{1}{2} - \frac{4}{5} =$ _____ **(h)** $2\frac{3}{4} - \frac{7}{8} =$ _____ **(i)** $1\frac{9}{10} - \frac{3}{4} =$ _____

(j) $1\frac{7}{8} - \frac{3}{4} =$ _____

4. **(a)** $\frac{1}{2} + 1 + 1\frac{1}{2} =$ _____ **(b)** $\frac{3}{4} + \frac{3}{4} =$ _____ **(c)** $\frac{1}{4} + \frac{5}{8} =$ _____

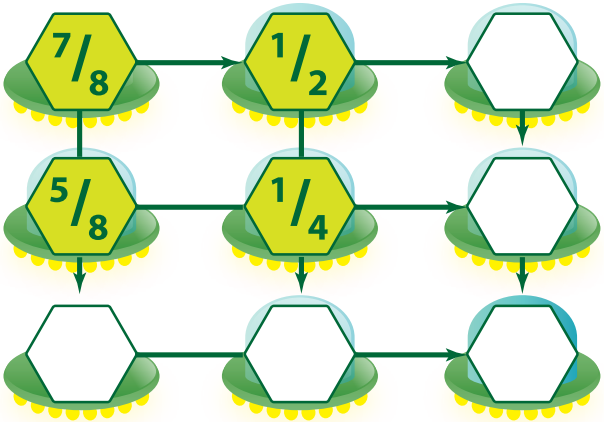
(d) $\frac{6}{8} + \frac{5}{8} =$ _____ **(e)** $\frac{7}{10} + \frac{9}{10} =$ _____ **(f)** $\frac{1}{4} + \frac{1}{2} =$ _____

Content description: Solve problems involving addition and subtraction of fractions with the same or related denominators (ACMNA126) AC

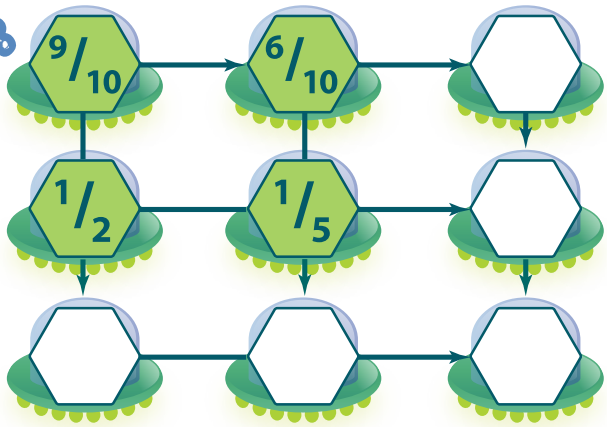
FRACTION SUBTRACT

Follow all the arrows to complete the fraction subtractions.

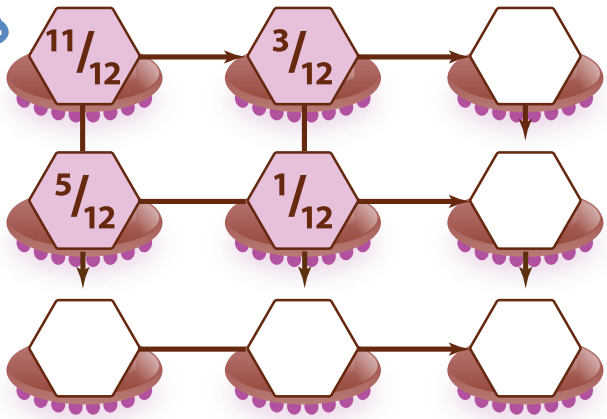
1.



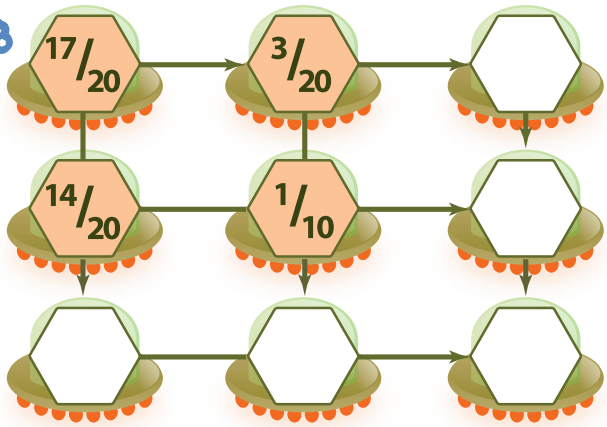
2.



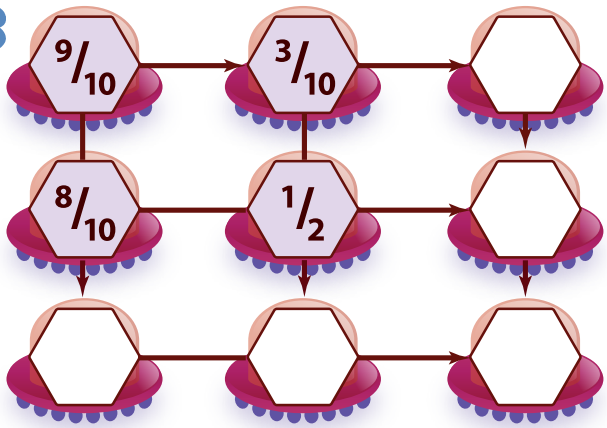
3.



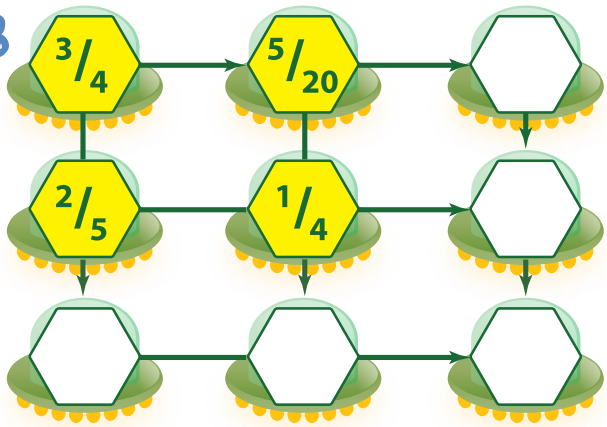
4.



5.



6.

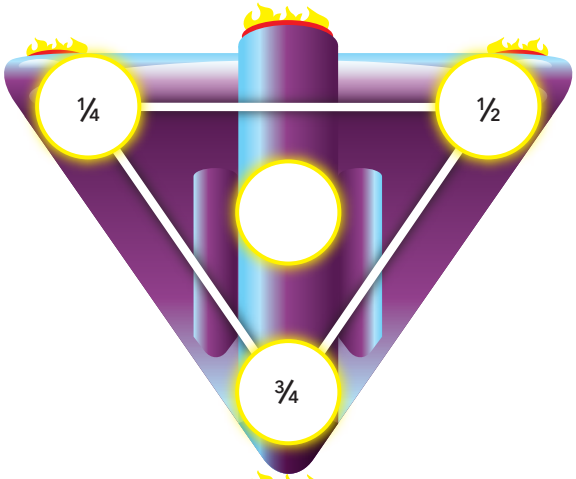


Content description: Solve problems involving addition and subtraction of fractions with the same or related denominators (ACMNA126) AC

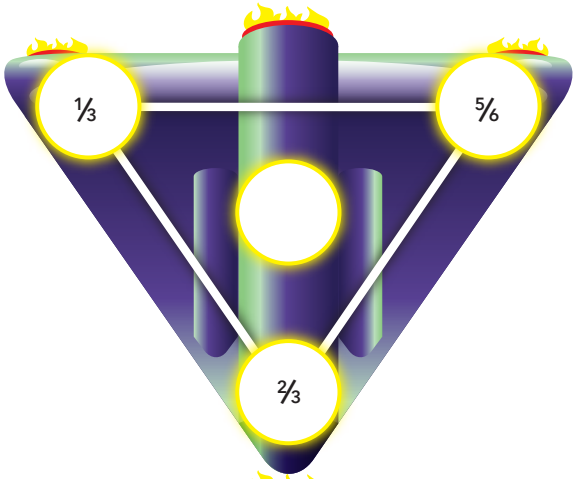
FRACTION SPACESHIPS

Add all corners to provide a central answer.

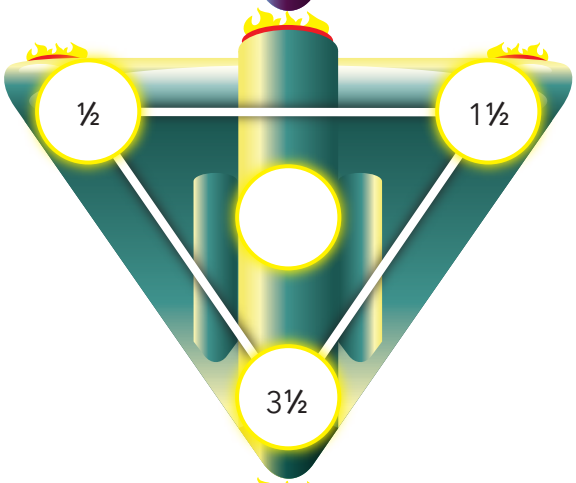
(a)



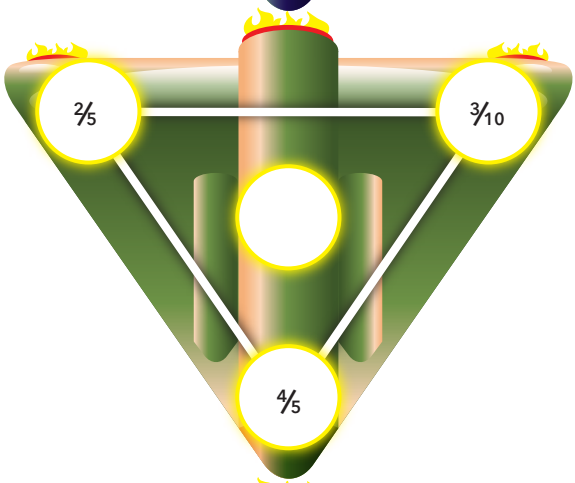
(b)



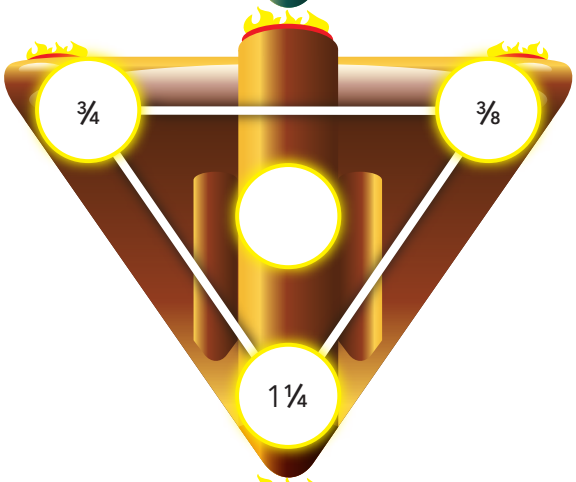
(c)



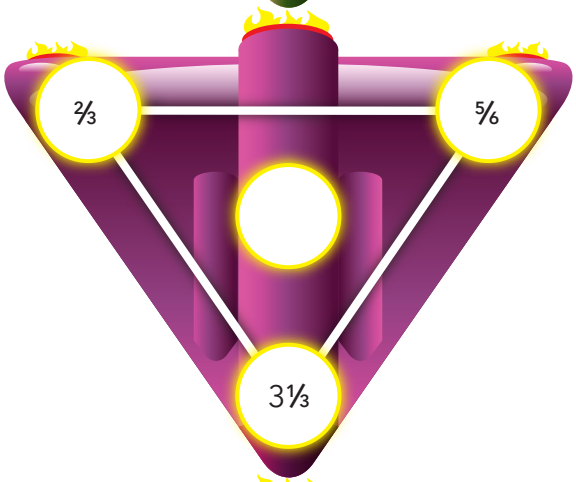
(d)



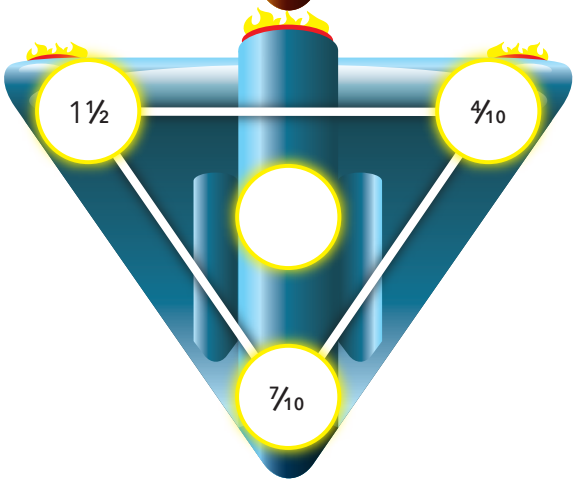
(e)



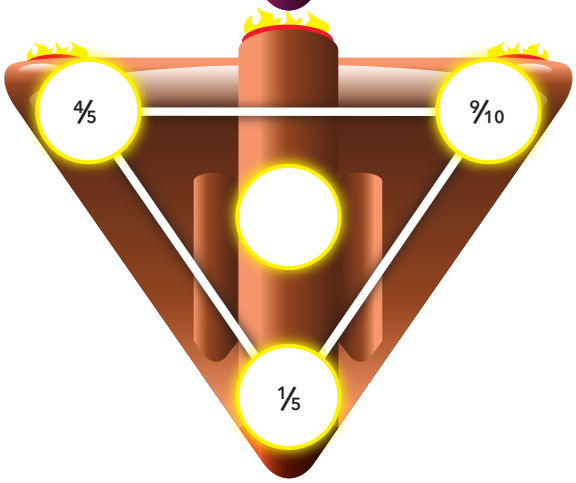
(f)



(g)



(h)



Content description: Solve problems involving addition and subtraction of fractions with the same or related denominators (ACMNA126)

THE SUNS AND STARS COME OUT TO PLAY

Work out the value of the ☆ and ☼ in each problem.

☆ + ☼ = 12 ☼ - ☆ = 2 ☆ = ☼ =	☆ + ☼ = 44 ☼ - ☆ = 2 ☆ = ☼ =	☆ + ☼ = 22 ☼ - ☆ = 16 ☆ = ☼ =
☆ + ☼ = 31 ☼ - ☆ = 3 ☆ = ☼ =	☆ + ☼ = 72 ☼ - ☆ = 0 ☆ = ☼ =	☆ + ☼ = 12 ☼ - ☆ = 2 ☆ = ☼ =
☆ + ☼ = 23 ☼ - ☆ = 5 ☆ = ☼ =	☆ + ☼ = 120 ☼ - ☆ = 48 ☆ = ☼ =	☆ + ☼ = 39 ☼ - ☆ = 7 ☆ = ☼ =
☆ + ☼ = 94 ☼ - ☆ = 2 ☆ = ☼ =	☆ + ☼ = 83 ☼ - ☆ = 19 ☆ = ☼ =	☆ + ☼ = 47 ☼ - ☆ = 7 ☆ = ☼ =
☆ + ☼ = 101 ☼ - ☆ = 1 ☆ = ☼ =	☆ + ☼ = 63 ☼ - ☆ = 37 ☆ = ☼ =	☆ + ☼ = 29 ☼ - ☆ = 7 ☆ = ☼ =
☆ + ☼ = 48 ☼ - ☆ = 24 ☆ = ☼ =	☆ + ☼ = 50 ☼ - ☆ = 16 ☆ = ☼ =	☆ + ☼ = 37 ☼ - ☆ = 13 ☆ = ☼ =

Content description: Explore the use of brackets and order of operations to write number sentences (ACMNA134) AC

JUST PICK THE RIGHT ANSWER

Equation				
6 + (7 x 2) =	26	12	22	20
36 ÷ (18 - 16) =	14	18	16	12
54 - (7 x 3) =	141	33	21	44
57 - 6 + 11 + 12 =	52	72	28	74
49 + (4 x 4) - 9 =	46	40	65	56
101 - (7 x 5) + 11 =	55	66	77	76
72 - (8 x 4) - 22 =	32	22	18	62
45 + 7 + (3 x 6) =	28	15	75	70
81 - 11 + (7 x 2) =	65	56	84	80
64 ÷ 8 + 10 - (3 x 2) =	18	16	6	12
63 - 9 + (5 x 5) =	5	65	79	40
54 ÷ (3 x 3) - 2 =	4	14	7½	3
22 - 4 + 6 + 7 =	7	5	31	19

Check these equations to see if they are correct. Remember, when a problem has only addition and subtraction included it reads from left to right.

1. (72 ÷ 9) + 13 - (5 x 3) = 48

2. 19 + 12 - 3 + 4 - 6 = 11

3. 43 + 13 - 6 + 5 - 9 = 30

Content description: Explore the use of brackets and order of operations to write number sentences (ACMNA134) AC

IF THE ANSWER IS, THEN ...

💀 + 🏴‍☠️ = 16	💀 + 🏴‍☠️ = 56	💀 + 🏴‍☠️ = 19	🍯 x 🔦 = 24
💀 - 🏴‍☠️ = 8	💀 - 🏴‍☠️ = 12	💀 - 🏴‍☠️ = 1	🔦 - 🍯 = 2
💀 =	💀 =	💀 =	🍯 =
🏴‍☠️ =	🏴‍☠️ =	🏴‍☠️ =	🔦 =
Create your own	Create your own	Create your own	Create your own
x =	x =	x =	+ =

🍯 x 🔦 = 48	🍯 x 🔦 = 36	💀 + 🏴‍☠️ = 29	💀 + 🏴‍☠️ = 51
🔦 - 🍯 = 8	🔦 - 🍯 = 9	💀 - 🏴‍☠️ = 3	💀 - 🏴‍☠️ = 1
🍯 =	🍯 =	💀 =	💀 =
🔦 =	🔦 =	🏴‍☠️ =	🏴‍☠️ =
Create your own	Create your own	Create your own	Create your own
+ =	+ =	x =	x =

💀 + 🏴‍☠️ = 44	🍯 x 🔦 = 54	🍯 x 🔦 = 39	🍯 x 🔦 = 60
💀 - 🏴‍☠️ = 8	🔦 - 🍯 = 15	🔦 - 🍯 = 10	🔦 - 🍯 = 7
💀 =	🍯 =	🍯 =	🍯 =
🏴‍☠️ =	🔦 =	🔦 =	🔦 =
Create your own	Create your own	Create your own	Create your own
x =	+ =	+ =	+ =

💀 - 🏴‍☠️ = 16	💀 - 🏴‍☠️ = 12	💀 x 🏴‍☠️ = 144	💀 x 🏴‍☠️ = 52
💀 + 13 = 100	💀 - 9 = 30	💀 - 🏴‍☠️ = 0	💀 - 🏴‍☠️ = 9
💀 =	💀 =	💀 =	💀 =
🏴‍☠️ =	🏴‍☠️ =	🏴‍☠️ =	🏴‍☠️ =
Create your own	Create your own	Create your own	Create your own
x =	+ =	+ =	+ =

AC

Content description: Explore the use of brackets and order of operations to write number sentences (ACMNA134)

ADDITION

NUMBER

TEACHER INFORMATION

Objectives

Understands the role of place value when adding numbers.
Calculates addition problems with numbers up to six digits.

Concepts required

Place value
Trading
Problem solving

Answers

1. (a) 592 (b) 743 (c) 763
   (d) 1032 (e) 1084

2. (a) 5351 (b) 6855 (c) 6242
   (d) 10 812 (e) 12 218

3. (a) 26 214 (b) 58 015 (c) 800 499
   (d) 711 914 (e) 1 512 511

4. (a) 640 (b) 7216 (c) 13 936
   (d) 63 306 (e) 620 219

5. (a) 795 (b) 7695 (c) 23 490
   (d) 107 330 (e) 1 524 077

6. (a)
```
  368
+ 355
  723
```
(b)
```
  686
+ 389
 1075
```
(c)
```
 3242
+ 1468
 4710
```
(d)
```
 7045
+ 2899
 9944
```
(e)
```
  321
  248
+ 276
  845
```
(f)
```
 12 556
+ 7 568
 20 124
```
(g)
```
 2061
 2601
+ 2004
 6666
```
(h)
```
 5976
 2841
+ 3503
12 320
```
(i)
```
6 090 090
+ 3 900 919
9 991 009
```

ADDITION

NUMBER

PUPIL NAME .....

1.

(a)	(b)	(c)	(d)	(e)
347	508	479	645	786
+ 245	+ 235	+ 284	+ 387	+ 298
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

2.

(a)	(b)	(c)	(d)	(e)
2143	4066	3458	8417	7654
+ 3208	+ 2789	+ 2784	+ 2395	+ 4564
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

3.

(a)	(b)	(c)	(d)	(e)
12 045	34 658	421 500	385 929	845 845
+ 14 169	+ 23 357	+ 378 999	+ 325 985	+ 666 666
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

4.

(a)	(b)	(c)	(d)	(e)
248	3460	5624	21 462	201 455
237	2548	5895	20 555	286 209
+ 155	+ 1208	+ 2417	+ 21 289	+ 132 555
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

5.

(a)	(b)	(c)	(d)	(e)
134	1417	7209	19 405	742 581
224	1582	6318	11 652	330 609
312	2091	5427	22 074	199 500
+ 125	+ 2605	+ 4536	+ 54 199	+ 251 387
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

6. ***Find the missing numbers to complete each sum.***

(a)
```
  3 6 □
+ 3 5 5
-------
  □ 2 3
```

(b)
```
  □ 8 6
+ 3 8 9
-------
  □ 0 □ □
```

(c)
```
  3 □ 4 2
+ □ 4 6 □
---------
  4 7 1 0
```

(d)
```
  7 0 4 □
+ 2 □ 9 9
---------
  □ 9 □ 4
```

(e)
```
  3 2 □
  2 □ 8
+ □ 7 6
-------
  8 4 5
```

(f)
```
  1 2 □ □ 6
+ 7 5 6 □
---------
  □ □ 1 2 4
```

(g)
```
  □ 0 6 1
  2 □ 0 □
+ □ 0 □ 4
---------
  6 6 6 6
```

(h)
```
  5 9 7 6
  □ 8 4 □
+ 3 □ 0 3
---------
  □ 2 3 2 0
```

(i)
```
  6 □ 9 0 0 □ 0
+ □ 9 0 □ □ 1 9
---------------
  9 9 □ 1 0 0 □
```

TEACHER INFORMATION

Objectives

Continues and completes number patterns by following set rules.
Recognises and writes missing components in number sentences.

Concepts required

Rules and patterns
Use of <, > and = signs
Using brackets first in any number sentence
Fractions, decimals, percentages

Answers

1. (a) 18 (b) 46 (c) 156
   (d) 230 (e) 1098 (f) 6850
2. (a) 7 (b) 18 (c) 42
   (d) 71 (e) 365 (f) 2775
3. (a) 16, 32, 64, 128, 256 – Double each number
   (b) 16, 25, 36, 49, 64 – Add on by odd numbers
   (c) 9, 8, 11, 10, 13 – Add 3, subtract 1
   (d) 16, 64, 32, 128, 64 – Halve, multiply by 4
4. (a) > (b) = (c) =
   (d) < (e) > (f) <
   (g) < (h) > (i) >
5. (a) (7 x 3) + 4 = 25 (b) 8 + (3 x 5) < 25
   (c) (3 x 3) + (10 –3) > 15 (d) (30 x 5) – 50 = 100
   (e) (11 – 7) x (36 ÷ 12) = 12 (f) (24 ÷ 8) x (8 – 6) = 6
6. (a) false (b) false (c) true
   (d) true (e) true (f) false
   (g) false (h) true (i) false
7. Answers will vary.

NUMBER SENTENCES AND PATTERNS

PUPIL NAME .....

NUMBER

1. Double each number.

(a) 9 = _____ (b) 23 = _____ (c) 78 = _____ (d) 115 = _____

(e) 549 = _____ (f) 3425 = _____

2. Halve each number.

(a) 14 = _____ (b) 36 = _____ (c) 84 = _____ (d) 142 = _____

(e) 730 = _____ (f) 5550 = _____

3. Complete these number sequences. Write the rule.

(a) 1, 2, 4, 8, ____, ____, ____, ____, ____ [ ]

(b) 0, 1, 4, 9, ____, ____, ____, ____, ____ [ ]

(c) 2, 5, 4, 7, 6, ____, ____, ____, ____, ____ [ ]

(d) 8, 4, 16, 8, 32, ____, ____, ____, ____, ____ [ ]

4. Use <, > or = to make these number sentences true.

(a) 8 + 2 [ ] 6.75 + 1.25 (b) 75% [ ] 0.75 (c) (8 x 4) + 8 [ ] 4 x 10

(d) 20% of 100 [ ] $^1/_4$ (e) 50 x 50 [ ] 250 (f) 3 x (6 + 2) [ ] 42

(g) (20 – 16) x 11 [ ] 45 (h) 2.5 [ ] 25% (i) 72 [ ] 6 + (9 x 7)

5. Add brackets to make these number sentences true.

(a) 7 x 3 + 4 = 25 (b) 8 + 3 x 5 < 25 (c) 3 x 3 + 10 – 3 > 15

(d) 30 x 5 – 50 = 100 (e) 11 – 7 x 36 ÷ 12 = 12 (f) 24 ÷ 8 x 8 – 6 = 6

6. Write true or false.

(a) 19 – 6 = 12 [ ] (b) 91 x 0 = 91 [ ] (c) 8 + 9 + 5 = 22 [ ]

(d) $^1/_2$ + $^1/_4$ = 0.75 [ ] (e) 7 x 8 > 55 [ ] (f) 25% of 100 > 25 [ ]

(g) (6 x 4) + 18 < 40 [ ] (h) (9 x 9) + 9 = 9 + (9 x 9) [ ]

(i) 0.42 + 0.58 < 100 [ ]

7. Write a number sentence to equal each number. Use each of the four operations in each number sentence.

(a) 40 = [ ] (b) 100 = [ ]

(c) 1 = [ ] (d) 201 = [ ]