

Revision & Practice Worksheet 20

A Indices: Evaluating Integer powers

Evaluate:

- | | | |
|---------------------------|---------------------------|---------------------------|
| 1 $2^4 + 3^2$ | 2 $3^4 - 2^3$ | 3 $2^5(2^2 + 3^2)$ |
| 4 $3^2(4^2 + 3^3)$ | 5 $4^2(3^2 + 2^4)$ | 6 $2^5(3^2 + 2^3)$ |
| 7 $(6^2 + 2)^2$ | 8 $(3^3 - 2^4)^2$ | 9 $(2^4 + 3^2)^2$ |
| 10 $5^2(3 + 2)$ | 11 $2^4(3^2 + 2)$ | 12 $2^3(3^4 - 12)$ |
| 13 $5^3 \times 3^2 + 2^4$ | 14 $6^2 \times 2^2 - 3^2$ | 15 $5^3 \times 3^2 - 6^2$ |

B Cartesian plane: Finding the gradient of a line

Find the gradient of the line passing through the following points:

- | | | |
|------------------|------------------|-------------------|
| 1 (0, 0)(2, 1) | 2 (0, 0)(-3, 2) | 3 (4, 5)(5, 4) |
| 4 (3, -2)(2, 3) | 5 (2, 1)(4, 1) | 6 (3, -1)(-2, -1) |
| 7 (1, 2)(-2, 3) | 8 (2, 4)(-3, 1) | 9 (5, 4)(-2, 1) |
| 10 (3, -2)(0, 4) | 11 (2, -3)(4, 0) | 12 (4, 0)(0, 3) |

C Cartesian plane: Simultaneous equations

For the following equations:

(a) Solve using simultaneous methods

(b) Sketch the pairs of lines on the same set of axes and locate the intersection point

- | | | |
|----------------|-------------|---------------|
| 1 $y = 2x + 5$ | 2 $y = 2x$ | 3 $y = x - 5$ |
| $y = x + 7$ | $y = x + 3$ | $y = 2x - 4$ |

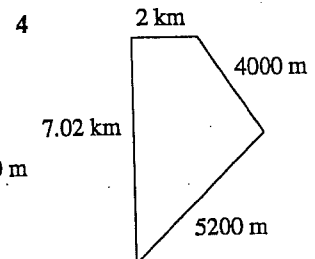
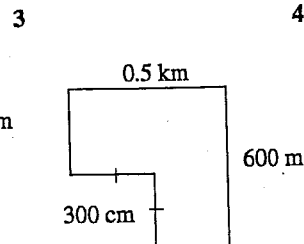
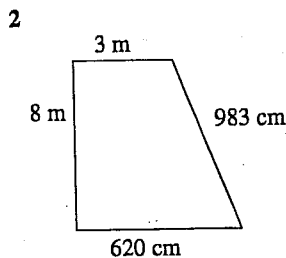
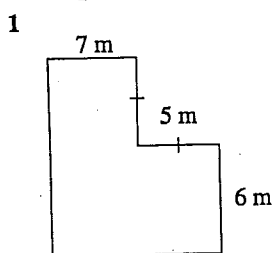
D Measurement: Converting units

Complete the missing numbers:

- | | |
|--------------------------|----------------------------|
| 1 6 km = _____ m | 2 2.04 km = _____ m |
| 3 5 m = _____ cm | 4 6.023 m = _____ cm |
| 5 7 cm = _____ mm | 6 3.04 cm = _____ mm |
| 7 800 m = _____ km | 8 2138 m = _____ km |
| 9 7 years = _____ months | 10 3 hours = _____ minutes |
| 11 8000 L = _____ kL | 12 5080 L = _____ kL |
| 13 3000 ml = _____ L | 14 89 000 kg = _____ t |
| 15 81 682 kg = _____ t | 16 58 000 kg = _____ t |
| 17 8000 kg = _____ t | 18 80 101 g = _____ kg |
| 19 20 100 g = _____ kg | 20 50 100 g = _____ kg |

E Measurement: Perimeter of shapes with straight sides

Find the perimeter of these shapes:



Worksheet 20

1 25	2 73	3 416	4 387
5 400	6 544	7 1444	8 121
9 625	10 125	11 176	12 552
13 1141	14 135	15 1089	

1 $\frac{1}{2}$	2 $-\frac{2}{3}$	3 -1	4 -5	5 0
6 0	7 $-\frac{1}{3}$	8 $\frac{3}{5}$	9 $\frac{3}{7}$	10 -2
11 $\frac{1}{2}$	12 $-\frac{3}{4}$			

C 1 (a) $x = 2$
 $y = 9$

(b) For the sketch:

$y = 2x + 5$

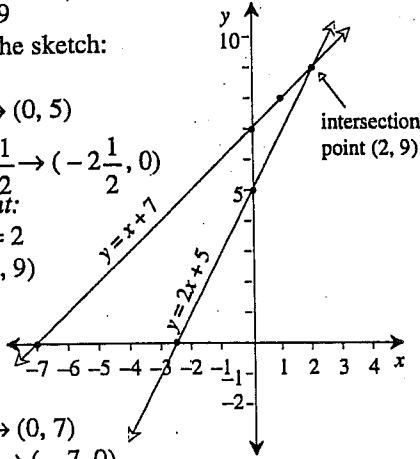
y-int. = 5 → (0, 5)

x-int. = $-2\frac{1}{2}$ → $(-2\frac{1}{2}, 0)$

Check point:

Choose $x = 2$

$y = 9$ → (2, 9)



$y = x + 7$

y-int. = 7 → (0, 7)

x-int. = -7 → (-7, 0)

Check point:

Choose $x = 1$

$y = 8$ → (1, 8)

2 (a) $x = 3$
 $y = 6$

(b) For the sketch:

$y = 2x$

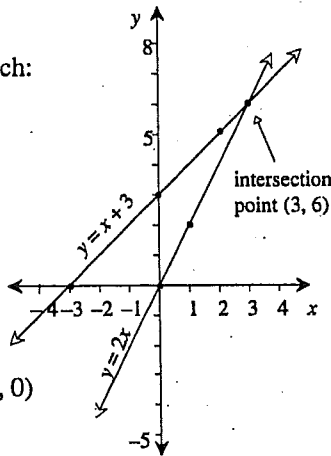
y-int. = 0 → (0, 0)

x-int. = 0 → (0, 0)

Check point:

Choose $x = 1$

$y = 2$ → (1, 2)



$y = x + 3$

y-int. = 3 → (0, 3)

x-int. = -3 → (-3, 0)

Check point:

Choose $x = 2$

$y = 5$ → (2, 5)

3 (a) $x = -1$
 $y = -6$

(b) For the sketch:

$y = x - 5$

y-int. = -5 → (0, -5)

x-int. = 5 → (5, 0)

Check point:

Choose $x = 1$

$y = -4$ → (1, -4)

$y = 2x - 4$

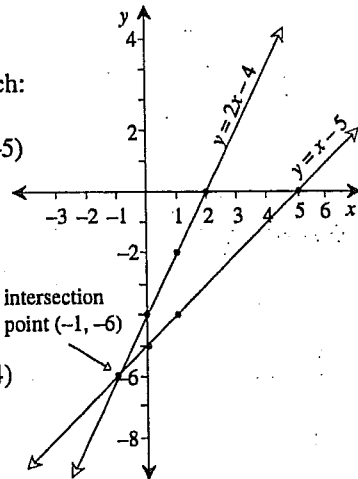
y-int. = -4 → (0, -4)

x-int. = 2 → (2, 0)

Check point:

Choose $x = 1$

$y = -2$ → (1, -2)



D 1 6000	2 2040	3 500
4 602.3	5 70	6 30.4
7 0.8	8 2.138	9 84
10 180	11 8	12 5.08
13 3	14 89	15 81.682
16 58	17 8	18 80.101
19 20.1	20 50.1	

E 1 46 m	2 2703 cm	3 2200 m
4 18 220 m		