
MATHEMATICS PREPARATION WORKBOOK

ANSWERS

FP14 BUSINESS MANAGEMENT
UNIVERSITY OF WARWICK

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Order of operations

Answers

1 18

2 13

3 $(17 - 5) \times 2 + 4 = 28$

4 1

5 16

Rounding

Answers

- | | | | | |
|----------|----|-----------------|----|-----------------|
| 1 | a) | 249.5 (1 d.p.) | b) | 249.50 (2 d.p.) |
| 2 | a) | 0.958 (3 d.p.) | b) | 1.0 (1 d.p.) |
| 3 | a) | 598.09 (2 d.p.) | b) | 598.1 (1d.p.) |
| 4 | a) | 98,300 (3 s.f.) | b) | 98,000 (2 s.f.) |
| 5 | a) | 4 (1 s.f.) | b) | 3.5 (2 s.f.) |

Rules of indices

Answers

1 a 1

b 1

2 a 7

b 4

3 a 125

b 32

4 a $\frac{1}{25}$

b $\frac{1}{64}$

5 a $\frac{3x^3}{2}$

b $5x^2$

c $2x^6$

d x

6 a $\frac{1}{2}$

b $\frac{1}{9}$

c $\frac{8}{3}$

7 a x^{-1}

b x^{-7}

c $x^{\frac{1}{4}}$

8 a $\sqrt[5]{x^2}$

b $\frac{1}{\sqrt{x}}$

c $\frac{1}{\sqrt[4]{x^3}}$

9 a $5x^{\frac{1}{2}}$

b $2x^{-3}$

c $\frac{1}{3}x^{-4}$

10 a $x^3 + x^{-2}$

b $x^3 + x$

c $x^{-2} + x^{-7}$

Expanding brackets and simplifying expressions

Answers

1 a $6x - 3$

b $-10pq - 8q^2$

2 a $21x + 35 + 12x - 48 = 33x - 13$

b $40p - 16 - 12p - 27 = 28p - 43$

3 a $12x^2 + 24x$

b $20k^3 - 48k$

4 a $-y^2 - 4$

b $5x^2 - 11x$

5 a $-1 - 2m$

b $5p^3 + 12p^2 + 27p$

6 a $x^2 + 9x + 20$

b $x^2 + 10x + 21$

c $x^2 + 5x - 14$

d $x^2 - 25$

e $10x^2 - 31x + 15$

f $12x^2 + 13x - 14$

Ratio and Proportion

1 a) $2 : 3$ b) $3 : 4$ c) $1 : 2 : 3$

2 $5 : 9$

3 $8 : 9$

4 10 litres of red paint

5 £15