

Revision & Practice Worksheet 7

A Algebra: Adding and subtracting like terms

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|--------------------------------|---------------------------|
| 1 $4ac + 2a + 3b + 5a$ | 2 $6a + 9a - 11c + 2a$ |
| 3 $6a - 11a + 5b + 6c$ | 4 $11a - 5b + 2b - 7a$ |
| 5 $3ab + 2b - 4ba$ | 6 $6a + 2b - 2a + 2b$ |
| 7 $9a + 2b - 6c + a$ | 8 $11a + 2b + 11a - 2b$ |
| 9 $11a - 2b + 3a + 8a$ | 10 $12a + 13b + 2a - 14b$ |
| 11 $6a - 4b + 2a - 6c$ | 12 $16a - 4b + 2c - 8b$ |
| 13 $4ac + 2ca - 4a + 5b$ | 14 $19ad + da - 3d$ |
| 15 $17a + 5bd + db - 11b + 2c$ | |

B Algebra: Solving equations with brackets

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|---------------------|---------------------|
| 1 $6(a + 1) = 18$ | 2 $5(a + 3) = 10$ |
| 3 $10(a - 4) = 50$ | 4 $3(2a + 5) = 6$ |
| 5 $4(a - 2) = 8$ | 6 $5(a - 4) = 15$ |
| 7 $7(a + 1) = 14$ | 8 $8(a + 2) = 24$ |
| 9 $9(a - 3) = 18$ | 10 $6(2a + 1) = 18$ |
| 11 $2(3a - 1) = 20$ | 12 $3(2a - 1) = 24$ |

C Algebra: Solving equations with pronumerals on both sides

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|-------------------------|---------------------------|
| 1 $4x + 3 = 3x + 2$ | 2 $5x + 2 = 4x - 3$ |
| 3 $6x - 2 = 7x + 4$ | 4 $10x + 8 = 12x - 10$ |
| 5 $6x - 2 = 4x + 12$ | 6 $3x + 2 = 5x - 6$ |
| 7 $3(x + 1) = x + 6$ | 8 $2(x - 1) = x - 4$ |
| 9 $3(x - 4) = x + 6$ | 10 $4(x + 1) = 3x + 6$ |
| 11 $5x - 10 = 3(x + 6)$ | 12 $11x + 19 = 2(x + 10)$ |

D Indices: Multiplying Index expressions

- | | |
|---------------------------------|--|
| 1 $a \times a^4$ | 2 $ab^2 \times b^3$ |
| 3 $a^2b \times ab$ | 4 $2a^2b^2 \times ab$ |
| 5 $5a^2b \times 3ab$ | 6 $6ab \times a^4b$ |
| 7 $a^2b^3 \times a \times a^4$ | 8 $2a^2b^3 \times 2a \times 5a^2$ |
| 9 $6a^3 \times 4a \times 5a$ | 10 $9a^4 \times 2a \times 3a$ |
| 11 $6a \times 2a^2 \times 3a$ | 12 $5a \times 2a \times a \times a^2$ |
| 13 $6a \times 5ab \times b^4$ | 14 $2a \times 3a \times 4b \times b^2$ |
| 15 $6a \times 2b^2 \times 3b^4$ | |

E Indices: Dividing Index expressions

- | | | |
|------------------------------|--------------------------------|-----------------------------------|
| 1 $a^4b^6 \div ab^2$ | 2 $2a^3b^2 \div 3ab$ | 3 $4a^2b \div 3ab$ |
| 4 $3a^2b^2 \div 6ab^4$ | 5 $6a^2c^4 \div 3ac^2$ | 6 $9a^4c^8 \div 3ab^4$ |
| 7 $9a^2c^8 \div 6ac^2$ | 8 $12a^2b^3c \div 6ac$ | 9 $\frac{15a^2b^3c}{18ab}$ |
| 10 $\frac{19a^2b^3c^4}{2ac}$ | 11 $\frac{17a^4c^8}{3a^2c^6}$ | 12 $\frac{21a^2b^4}{7ab^3}$ |
| 13 $\frac{121a^2b^2c}{11bc}$ | 14 $\frac{15a^2b^3c^8}{5ab^2}$ | 15 $\frac{24a^4b^3c^8}{8a^2bc^6}$ |

Answers

Worksheet 7

- A**
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|----|------------------------|----|------------------|
| 1 | $4ac + 7a + 3b$ | 2 | $17a - 11c$ |
| 3 | $-5a + 5b + 6c$ | 4 | $4a - 3b$ |
| 5 | $2b - ab$ | 6 | $4a + 4b$ |
| 7 | $10a + 2b - 6c$ | 8 | $22a$ |
| 9 | $22a - 2b$ | 10 | $14a - b$ |
| 11 | $8a - 4b - 6c$ | 12 | $16a - 12b + 2c$ |
| 13 | $6ac - 4a + 5b$ | 14 | $20ad - 3d$ |
| 15 | $17a + 6bd - 11b + 2c$ | | |
- B**
- | | | | | | | | | | |
|----|----------------|----|----------------|---|---|---|-----------------|----|---|
| 1 | 2 | 2 | -1 | 3 | 9 | 4 | $-1\frac{1}{2}$ | 5 | 4 |
| 6 | 7 | 7 | 1 | 8 | 1 | 9 | 5 | 10 | 1 |
| 11 | $3\frac{2}{3}$ | 12 | $4\frac{1}{2}$ | | | | | | |
- C**
- | | | | | | | | | | |
|----|----|----|----------------|---|----|---|---|----|---|
| 1 | -1 | 2 | -5 | 3 | -6 | 4 | 9 | 5 | 7 |
| 6 | 4 | 7 | $1\frac{1}{2}$ | 8 | -2 | 9 | 9 | 10 | 2 |
| 11 | 14 | 12 | $\frac{1}{9}$ | | | | | | |
- D**
- | | | | | | | | |
|----|------------|----|------------|----|----------|----|------------|
| 1 | a^5 | 2 | ab^5 | 3 | a^3b^2 | 4 | $2a^3b^3$ |
| 5 | $15a^3b^2$ | 6 | $6a^5b^2$ | 7 | a^7b^3 | 8 | $20a^5b^3$ |
| 9 | $120a^5$ | 10 | $54a^6$ | 11 | $36a^4$ | 12 | $10a^5$ |
| 13 | $30a^2b^5$ | 14 | $24a^2b^3$ | 15 | $36ab^6$ | | |
- E**
- | | | | | | | | |
|----|--------------------|----|-----------------------|----|----------------------|----|------------------|
| 1 | a^3b^4 | 2 | $\frac{2a^2b}{3}$ | 3 | $\frac{4a}{3}$ | 4 | $\frac{a}{2b^2}$ |
| 5 | $2ac^2$ | 6 | $\frac{3a^3c^8}{b^4}$ | 7 | $\frac{3ac^6}{2}$ | 8 | $2ab^3$ |
| 9 | $\frac{5ab^2c}{6}$ | 10 | $\frac{19ab^3c^3}{2}$ | 11 | $\frac{17a^2c^2}{3}$ | 12 | $3ab$ |
| 13 | $11a^2b$ | 14 | $3abc^8$ | 15 | $3a^2b^2c^2$ | | |