1. *(a)* Simplify $w^5 \times w^4$.

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[1]

11. (a) Simplify $2a^5b^2 \times 3a^3b$.

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[2]

11. *(a)* Simplify the expression

$$3a^4b^3 \times 2a^3b.$$

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[2]

9. *(a)* Simplify $\dfrac{12a^7b^4}{4ab^3}$.

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[2]

(b) Find in its simplest form the reciprocal of $3x^{-2}$.

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[2]

17. *(a)* Simplify **each** of the following.

(i) $3x^{\frac{3}{2}} \times 2x^{\frac{5}{2}}$

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[2]

(ii) $\dfrac{24x^{\frac{7}{2}}}{6x^{-\frac{3}{2}}}$

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[2]

(b) Express $25^{-\frac{1}{2}}$ as a fraction.

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[2]

15. Simplify **each** of the following.

(a) $(3x^5y^2)^3$

[2]

(b) $\dfrac{24 \times a^{\frac{5}{2}} \times a^{-\frac{1}{2}}}{8 \times a^4}$

[2]

10. *(a)* Simplify $(5x^3)^2$.

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[2]

8. *(a)* Simplify the expression

$$(4x^3y^2) \times (2x^4y^5).$$

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[2]

(d) Simplify the following expressions.

(i) $(4y^2x^3)^3$

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[2]

(ii) $\dfrac{a^{\frac{13}{3}} \times a^{-\frac{4}{3}}}{a^{-3}}$

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[2]

15. Simplify $64^{\frac{2}{3}} \times 3^{-4}$ leaving your answer in fractional form.

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[2]

19. Express $9^{-\frac{1}{2}}$ as a fraction.

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[2]

20. *(a)* Simplify $\dfrac{24x^{12}y^6}{8x^4y^8}$.

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[2]

(b) Simplify $(2x^3y^2)^4$.

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[2]

(c) Simplify $3y^{\frac{1}{2}} \times 4y^{\frac{3}{2}}$.

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[2]

(d) Simplify $\dfrac{6x^{\frac{1}{2}}}{3x^{-\frac{1}{2}}}$.

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[1]